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ABSTRACT

This research study focuses on two interrelated aspects of the development of bilingualism, the development of awareness of two separate linguistic systems and the occurence of interference phenomena. The research was conducted in a small town in East Central Illinois. The sample for the study included all the Mexican-American children enrolled in kindergarten through the fourth grade and three preschool children. The primary sources of data were tape recordings of natural discourse. The study is divided into the following chapters: (1) Introduction; (2) Deviations from Standard English and Spanish; (3) An Evaluation of the Spanish and English Deviations from Standard Language Norms; (4) The Acquisition and Use of Spanish and English Color Terms; (5) Special Functions of Code-Switching; (6) Stylistic Code-Switching in Narratives; (7) Bilingual Strategies of Communication; (8) Intra-Sentential Code-Switching; (9) Language of the Sentence; (10) Ellipsis in Bilingual Discourse; (11) Developmental Trends in the Syntax of Code-Switching; and (12) Conclusion. An appendix provides demographic information on the population studied and references. (CFM)

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The Acquisition of Communicative Competence in a Bicultural Setting

NIE Grant NE-G-00-3-0147

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Erica McClure
Project Director

TABLE OF CONTENTS

Chapter I INTRODUCTION 1

Erica McClure

The Study and its Significance 1
Objectives 2
The Community 6
Method 9
The Children 9
Data Collection 10
Equipment 13

Chapter II DEVIATIONS FROM STANDARD ENGLISH AND SPANISH 16

Erica McClure, Malcolm McClure, and
Joan Friedenber-Figueroa

1 English Deviations from Standard 21
1.1 Noun Phrase Constituents 21
1.1.1 Noun 21
1.1.1.1 Number Morphology in Nouns 21
1.1.1.2 Number Agreement 24
1.1.1.2.1 Demonstrative Number Agreement 24
1.1.1.2.2 Number Agreement Across Noun Phrases 25
1.1.1.3 Mass vs. Count Nouns 26
1.1.1.4 Genitive of Nouns 27
1.1.2 Pronouns 29
1.1.2.1 Omission 29
1.1.2.1.1 Subjects 29
1.1.2.1.2 Objects 30
1.1.2.2 Double Marking 31
1.1.2.3 Case Errors 32
1.1.2.4 Gender Errors 34
1.1.2.5 Number Errors 35
1.1.2.6 Relative Deletion 36
1.1.2.7 Reflexive Errors 37
1.1.2.8 Possessive/Article Errors 38
1.1.2.9 Article for Pronoun 39
1.1.2.10 Possessive Adjectives 40
1.1.3 Determiners 41
1.1.3.1 Articles 41
1.1.3.1.1 Number Errors 41
1.1.3.1.2 Definite/Indefinite Errors 42
1.1.3.1.3 Omission of Article 43
1.1.3.1.4 An/A Errors 46
1.1.4 Nominalization of Adjectives 47
1.2 Verb Phrase 48
1.2.1 Verb 48
1.2.1.1 Present Tense Inflection Problems 48
1.2.1.2 Omission of Helping Verbs 53
1.2.1.2.1 Omission of the Copula _be_ 53
1.2.1.2.2 Omission of the Progressive _be_ 55

1.2.1.2.3 Omission of be with the Past Participle 57
1.2.1.2.4 Omission of do 58
1.2.1.3 Omission of the Present Participle Marker 62
1.2.1.4 Omission of Future Marker 63
1.2.1.5 Incorrect Past and Past Participle 65
1.2.1.6 Problems of Tense, Mode, and Aspect 70
1.2.1.7 Omission of to with Infinitives 72
1.2.2 Prepositions 74
1.2.2.1 Incorrect Prepositions 74
1.2.2.2 Preposition Omission 75
1.3 Conjunction 77
1.4 Negation 78
1.4.1 Double Negation 78
1.4.2 Some/Any Alternation 79
1.4.3 No/Not Substitution 80
1.5 Interrogation 81
1.5.1 Direct Questions 81
1.5.1.1 Movement 82
1.5.1.2 Tense Attraction 83
1.5.1.3 Do Support 85
1.5.2 Indirect Questions 87
1.5.3 Incorrect Question Word 89
1.5.4 Tag Questions 90
1.6 Phonology 92
1.6.1 Devoicing of FInal Consonants 93
1.6.2 Weakening of Intervocalic t and d 95
1.6.3 L and R Alternation 96
1.6.4 Stengthening of Initial 97
1.6.5 Simplification of Word-Final Consonant Clusters 98
1.6.6 Reduction of Consonants 99
1.6.7 Suppression of Unaccented Syllables 100
2 Spanish Deviations from Standard 101
2.1 NP Constituents 101
2.1.1 Nouns 101
2.1.1.1 Number Errors in Nouns 101
2.1.1.2 Gender Errors in Nouns 101
2.1.1.3 Incorrect Formation of Nouns 101
2.1.2 Pronouns 101
2.1.2.1 Omission 101
2.1.2.1.1 Omission of Direct Object Pronouns 102
2.1.2.1.2 Omission of Indirect Object Pronouns 102
2.1.2.1.3 Omission of Reflexive Pronouns 102
2.1.2.2 Incorrect Insertion of Pronouns 103
2.1.3 Article Omission 103
2.2 Verb Phrase 104
2.2.1 Verbs 104
2.2.1.1 Verb Number Errors 104
2.2.1.2 Verb Person Errors 105
2.2.1.3 Verb Tense and Mood Errors 106
2.2.1.4 Modification of the Second Person Familiar Preterite 107

2.2.1.5 Overgeneralized Verb Form 108
2.2.1.6 Verb Choice 109
2.2.1.7 Verb Omissions 110
2.3 Prepositions 111
2.3.1 A Insertion and Deletion 111
2.3.2 Deletion of De 112
2.3.3 Deletion of En 112
2.3.4 En and A Alternation 113
2.4 Negation 114
2.5 Adjectives and Adverbs 115
2.5.1 Adjective Gender 115
2.5.2 Adjective Number 116
2.5.3 Overgeneralization of Adjectives 116
2.5.4 Adverb Choice and Adjectivalization 117
2.6 Phonology 117
2.6.1 F Aspiration 118
2.6.2 Intervocalic S Aspiration 119
2.6.3 S Aspiration and Deletion in Final Position 120
2.6.4 G and B Alternation 121
2.6.5 Intervocalic D Deletion 122
2.6.6 Intervocalic Y Insertion 122
2.6.7 L and R Alternation 123
2.6.8 N Insertion 126
2.6.9 R Deletion 127
2.6.10 R and D Alternation 128
2.6.11 Metathesis 129
2.6.12 Suppression of Unaccented Syllables - Especially in Word Initial Position 130

Chapter III AN EVALUATION OF THE SPANISH AND ENGLISH DEVIATIONS FROM STANDARD LANGUAGE NORMS 133

Erica McClure

Chapter IV THE ACQUISITION AND USE OF SPANISH AND ENGLISH COLOR TERMS 149

Erica McClure

1 Introduction 149
2 Materials and Procedures 152
3 Results 153
4 Discussion 156
Appendix 1 Measures of Uniformity 159
1 Boundary Uniformity Chart 160
2 Focal Uniformity Charts 161
Appendix 2 Diagrams of Color Spaces 164
Appendix 3 Distances Between Focal Chips 176

Chapter V SOCIAL FUNCTIONS OF CODE-SWITCHING 177

Erica McClure

1 Code Selection and Situation 177

(Chapter V continued)

2 Code Selection and Style 185
2.1 Emphasis 185
2.2 Focus 185
2.3 Elaboration 186
2.4 Clarification 186
2.5 Attention Attraction or Retention 187
2.6 Mode Shift 188
2.7 Topic Shift 189
2.8 Addressee Shift 190
3 Conclusion 192

Chapter VI STYLISTIC CODE-SWITCHING IN NARRATIVES 194

Erica McClure and James Wentz

1 Background 194
2 First Narrative 194
3 Second Narrative 201
4 Third Narrative 204
5 Spontaneous Narratives 212
6 Conclusion 214
Translations of Spanish Data 216

Chapter VII BILINGUAL STRATEGIES OF COMMUNICATION 219

James Wentz, adapted by Erica McClure

1 Introduction 219
2 Dominance in the Bilingual 220
3 Phonological Adaption 222
4 Borrowing 223
5 Interference 225
6 Awareness of Borrowing 227
7 Acceptability of Opposite Language Elements 232
8 Children's Ability to Adapt Phonologically 236
9 Code-Switching 240
10 Bilingual Types 242
11 On Constraining Codes 244

Chapter VIII INTRA-SENTENTIAL CODE-SWITCHING 248

James Wentz and Erica McClure

1 Introduction 248
2 Excepting the Unacceptable 250
3 The Ideal Bilingual 255
4 Grammatical Judgements of Bilingual Utterances 257
5 Testing Children for Code-Switching Acceptability 271
6 Mixing Word Level Morphology 290
7 Conclusion 292

Chapter IX LANGUAGE OF THE SENTENCE 294

James Wentz and Erica McClure

1 Introduction 294
2 Repetition in Translation 295
3 A Hard Look at Code-Changes and Code Mixes 298
4 Testing for Code-Mixing and Code-Changing 315

Chapter X ELLIPSIS IN BILINGUAL DISCOURSE 326

James Wentz and Erica McClure

1 Introduction 326
2 The Problem 330
3 The "Translation Hypothesis" 332
4 Underlying Code-Switch, Etc. 334
5 Identity or Synonymy? 335
6 Identity Types 342
7 Code-Change at Elliptical Response: The Bilingual 344

Chapter XI DEVELOPMENTAL TRENDS IN THE SYNTAX OF CODE-SWITCHING 348

Erica McClure

Chapter XII CONCLUSION 356

Erica McClure

APPENDIX A DEMOGRAPHIC INFORMATION ON THE POPULATION STUDIED 361

REFERENCES 364

Chapter I

INTRODUCTION

The Study and Its Significance

Today many individuals, especially members of ethnic minorities in plural societies and citizens of the third world, find themselves in situations in which it appears advantageous to learn a second language. Concomitantly many people have become concerned about the dangers inherent in such a situation. One possible danger is that of imperfect control of the native language followed in time by its abandonment. A perhaps more frightening possibility is imperfect control of both the native language and the second language.

Language proficiency is not only important in and of itself and because of its presumed effect on scholastic achievement and general cognitive ability (vid. e.g., Bernstein, 1961, 1962, 1964, 1970, 1972; Hess and Shipman, 1965), but also because it has social significance. For example, mastery of certain speech patterns may be the criterion of recruitment for and success in certain areas of activity. The results of ignorance of such speech patterns or their maladroit performance may range from social discomfort, to exclusion from or failure in certain areas. Thus, verbal behavior may be related to acculturation and upward mobility. Finally, language proficiency may be of consequence to mental health as is indicated, for example, by the work of Diebold (1965), Hymes (1962), and Lambert (1967). We conclude from the above that language proficiency is of great importance to the individual. What then can we do to facilitate the child's acquisition of language(s)? The answer in the case of ethnic minorities has been bilingual education.

Bilingual programs are now in varying stages of development and implementation throughout the country. However, those conducting these programs have increasingly come to feel that they are characterized by "...inadequate conceptualization and justification of particular methodologies, techniques, and curricular innovations..." (Torres-Trueba, 1973). A firmer foundation of fundamental research is desired. However, not only is there a dearth of literature with respect to those factors which influence attained proficiency in a language or languages, but there have been very few developmental studies of bilingualism in children. Up until 1970 research consisted primarily of case studies of the children of professional families (e.g., Leopold, 1939-1949, 1948, 1953; Burling, 1959; Ravem, 1968; Dato, 1970). Since 1970 studies of larger numbers of children such as those of Brisk (1972), Gonzales (1970), Kessler (1971), and Martinez-Bernal (1972), have increased our understanding of language acquisition in the bilingual, but the field is still in its infancy. A thorough understanding of the developmental sequence through which the incipient bilingual passes might suggest what types of intervention would be appropriate at a given time as well as providing a yardstick by which to measure the effectiveness of particular programs. It is with this belief that we began a study of the development of bilingualism among Mexican American children.

Objectives

Research focused on two interrelated aspects of the development of bilingualism - the development of awareness of two separate linguistic systems and the occurrence of interference phenomena.

(A) The development of awareness of two separate linguistic systems. Several different accomplishments are encompassed here. Included are:

1. Recognition of the fact that two separate systems exist.
2a. Identification of elements, syntactic, phonological, or lexical as appropriate[1] to a particular system.
2b. Observance of linguistic cooccurrence rules in speaking.
3a. Knowledge of the rules governing situational[2] code-switching.
3b. Application of the rules governing situational codeswitching.
4a. Knowledge of the rules governing metaphorical codeswitching.
4b. Application of the rules governing metaphorical codeswitching.
5a. Knowledge of marked code choice, i.e., deliberate violation of the norms governing codeswitching for affective purposes.
5b. Application of marked code choice.

---

[1] Appropriate here refers to appropriate by adult norms. A child such as one studied by Hernandez who rejected parallel lexicon in Spanish and English and insisted one word was sufficient for both at least in the case of new words such as animal names (Ervin-Tripp, 1970 p. 326) would be considered to have incompletely mastered this aspect of the developmental process.

[2] The distinction drawn here between situational and metaphorical code switching is influenced by but not identical to that of Blom and Gumperz, 1972. Situational switching refers to code alternation reflecting a change in the participants, setting, or topic of an interaction. Metaphorical switching refers to alternation which enables allusion to more than one social relationship among the same participants in an interaction, the situation remaining constant, and is governed by a set of norms just as is situational switching. The term marked code choice is used to refer to codeswitching for affective purposes only (but cf. Ervin-Tripp, 1972 p. 134-135). It depends for its effect upon the fact that it is in violation of the norms governing code choice.

(B) The occurrence of interference phenomena.[1] Two types of interference are to be considered here:

1. Phenomena at the level of competence. These are systematic features of the learner's language at a particular point in the acquisition process which are attributable to knowledge of another language.
2. Phenomena at the level of performance. These are occurrences in speech in one language of elements from another language which are attributable not to a lack of knowledge, but rather to noise present in the speech situation.

In conjunction with aforementioned areas of research the following hypotheses were proposed for investigation. The hypotheses pertaining to the first focus of the study are:

1. The onset of mastery of accomplishments 2 - 5 listed on page three will occur sequentially in the order given (note that the first accomplishment - recognition of the fact that two separate systems exist - is an all or nothing process and logically prior to the others).[2]

1a. Partial mastery of a lower ranked accomplishment, e.g., no. 3, may occur before complete mastery of a higher ranked accomplishment, e.g., no. 2.

---

[1] What constitutes an example of an interference phenomenon will be determined empirically by appeal to the linguistic intuition of adults serving as models for the children and through analysis of these adults' speech rather than by comparison to the standard language of a monolingual community.

[2] Ervin-Tripp (1972, p. 135) cites research supporting the hypothesis that mastery of situational codeswitching precedes mastery of other sociolinguistic mechanisms.

2. Receptive competence will precede productive competence; that is, mastery of 2a will precede mastery of 2b, mastery of 3a will precede mastery of 3b, etc.[1]
3. Greater variability among children will be observed in the age of mastery of sociolinguistic rules in the age of mastery of grammatical rules.[2]

The hypotheses pertaining to the second focus of the study are:

1. Interference phenomena at the level of competence will be more prevalent in the English than in the Spanish of the children studied.
2. Fewer interference phenomena at the level of competence will be discoverable in the English of the children studied with each year of schooling.
3. More interference phenomena at the level of competence will be discoverable in the Spanish of the children studied with each year of schooling.
4. Performance errors (types and tokens) will be more prevalent in the English than in the Spanish of the children studied.
5. Fewer performance errors (types and tokens) will be discoverable in the English of the children studied with each year of schooling.

---

[1] It is often pointed out (e.g., Fraser, Bellugi and Brown, Ervin-Tripp, 1970, 1972) that in the process of language acquisition interpretation appears to be more advanced than production.

[2] Weeks (1970) found a great difference in the ages at which the three preschool children she studied began to use "registers" to convey meaning and concluded: "There may be greater variation in the ages at which children learn to use the registers discussed in this paper than there is in the variation in the age at which they learn to perform other linguistic tasks such as forming plurals or putting together two word sentences. This is not too surprising since there is probably greater individual variation in adult competence in the use of registers than in ordinary competence."

6. More performance errors (types and tokens) will be discoverable in the Spanish of the children studied with each year of schooling.
7. Performance errors (types and tokens) in Spanish will occur most frequently when the topic is associated with the classroom.
8. Performance errors (types and tokens) in English will occur most frequently when the topic is associated with the home.

The Community

Research was conducted in a small town (approximate population 1400) in East Central Illinois. The majority of the residents are Anglos but about 10% are Mexican-Americans. The latter are divided into two groups - settled out families who are more or less permanently resident and migrant men. There is no barrio, nor are there residential clusters. Instead the Mexican-Americans are dispersed almost throughout the community with the exception of one newer section with only high cost housing. Most Mexican-Americans rent their housing which is generally of poor quality; a few families own comfortable homes.

The economic base of the town is its nurseries. However two small industrial firms are also located there. Other sources of employment include a drugstore, a variety store, a hardware store, two restaurants, a bar, a movie theatre, a bank, a newspaper, a gas station, a market, the post office, and the two schools. The nurseries are the main source of employment for the Mexican-Americans. A few are employed by the industrial firms and the market. There is one Mexican-American teacher's aide.

Social activity focuses around the churches and schools. There are several churches in town but no Catholic church. The minister of one congregation wished to allow the Catholic priest from the neighboring town to conduct services in his building, but his congregation opposed it. Consequently since most of the Mexican-Americans are Catholic they must go to the next town (about 3 miles) for services. Most attend irregularly, going only at major holidays or special occasions such as baptisms and weddings. The priest conducts the latter, at which usually only Mexican-Americans plus perhaps the sponsor's employer and the bilingual elementary school teacher are present, in Spanish.

There are two schools in town. One has grades K-4, the other 5-12. In 1972 a bilingual pull-out program[1] was begun in both.[2] The children of all but two of the Mexican-American families were enrolled in it. The parents all seem to be very concerned with their children's education, especially with their acquisition of skills in English. Parents of preschool children can be heard rehearsing them in counting in English even when they themselves know almost no English. However despite this concern, absenteeism among Mexican-American children is greater than that among Anglos. Moreover the school drop-out rate stood at 100% at the time of our research, no Mexican-American having graduated from the high school.

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[1] Kindergarteners in the program had a full school day attending the bilingual class in the morning and the regular Kindergarten class in the afternoon.

[2] The program was discontinued at the end of 1974-75 school year when a decrease in the enrollment of Spanish speaking children took place.

Athletic events at the high school and school programs at both the high school and the elementary school are major social events for the whole town. One son of the most upwardly mobile Mexican-American family - that of the bilingual program's teacher's aide - was a member of the varsity football team. His family participated fully in the round of activities surrounding the football season, but the other Mexican-American families generally do not. During the course of our research, the bilingual program in the elementary school sponsored a yearly Mexican-American culture day featuring music, dance, and food. This project brought many of the Mexican-American women to the school to cook as well as to watch their children perform in the program. The event was also well attended by the Anglos. It was the only event we witnessed in which large numbers of Anglos and Mexican-Americans participated jointly. Even on this occasion there was little interaction between the two groups.

Mexican-American and Anglo children in grades K-4 play together at recess and interact in class; although there is a tendency for same ethnicity play groups to form frequently, especially in the case of those children whose English is limited. Interaction between Anglos and Mexican Americans is much more restricted at the high school.

Outside school few of the Mexican-American children interact often with Anglos even though residential patterns are such that they have Anglo neighbors. Indeed elementary school children interact primarily with siblings after school.

Their parents also tend to interact rarely with Anglo neighbors. Cross ethnic visiting is uncommon, and parties tend to be segregated on ethnic lines. At the weddings, quincinieras, and dances we attended the only other Anglos present were the nursery owners who made brief appearances, the bilingual elementary school teacher, and on one occasion the kindergarten teacher. The paucity of social contacts between Anglos and Mexican-Americans is probably to a great extent due to the fact that only a few Mexican-American adults have more than a very limited knowledge of English while the only Anglo fluent in Spanish was the bilingual elementary school teacher.

Method

The Children

The sample for the study included all the Mexican-American children enrolled in Kindergarten through the fourth grade during the period of research plus three preschool children who were in the care of older children in the sample - a total of forty-two[1], seventeen households-contributing from one to five children each - were represented in this sample. The children ranged in age from 3 to 15.[2] Because of the high residential mobility of even the "settled-out" Mexican-Americans in the community only thirty children could be followed throughout the two year period of data collection.

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[1] Data obtained from observations of 6 Mexican-American children made in a headstart program in a nearby community during an earlier pilot project will also be included in this report.

[2] Demographic data on the children is presented in Appendix A.

The language proficiency of the children varied widely. Of the three preschool children studied one was almost equally proficient in Spanish and English although slightly Spanish dominant while two were strongly Spanish dominant knowing very little English. Of the twelve kindergarteners, one was English dominant, two were about equally proficient in both languages, two were Spanish dominant but were able to converse in English, three knew a small amount of English, and four appeared to know no English at all. Of those remaining in the community only one seemed to have noticeable difficulty in conversing in English upon reaching the first grade.

Among the older children, the only ones who spoke little English were two siblings who arrived from Mexico near the beginning of the project. The younger child, a girl, was placed in the second grade, and at the end of a year was beginning to use full sentences in English. Her brother who was placed in the fourth grade was still primarily using one word utterances at that point.

Data Collection

The primary source of our data was tape recordings of natural discourse. The children were recorded at home,[1] in the bilingual, kindergarten, and first grade classrooms, on the school playground, in a local park and in the project trailer. Full cooperation from the principal and teachers enabled us freely to record the children as they moved through a school day.

---

[1] The tape recordings made at homes varied with respect to the extent to which they appear to be representative of everyday verbal interaction. The most successful recordings were made in one family to which three children in our sample belonged. These recordings were made by a female Mexican-American assistant who established a close relationship with the family and stayed with them for several long weekends. Unfortunately it was not possible to establish equally close relationships with all families so the verbal interaction recorded in other homes was probably more constrained.

A central base inside the community was desired for equipment storage, the assembly of staff, and a place in which we could structure verbal interaction with the children as we so chose. Due to the unavailability of a suitable house, and to polite but firm opposition from the Anglo-American community to our renting an unoccupied basement in an existing facility such as a church, a 12 X 60 foot mobile home was rented and moved to a trailor court in town. A large expanse of lawn surrounding the trailer and a park located across the street allowed us to record the children as they played active outdoor games.

Taping at the school was done two to three times a week in the first three months of the project to familiarize the children and teachers with our presence and at least once a week thereafter. Recording at the project trailer took place once a week on the weekends. Two groups of children ranging in number from 5 to 12 were recorded in a day, one in the morning and one in the afternoon for a period of three hours each. At first groups were composed of sibling sets, but the children expressed a preference for same sex groups so after the first few months groups were composed of same sex sibling sets who were friends. Time for free play was allowed in each session, and outdoor and indoor toys and sports equipment were available. Snacks were provided. The children seemed to enjoy coming to the trailer and to be disappointed if we were forced to cancel a visit. For many of them such visits were just about the only occasions outside school during which they could play with their friends.

Tapes of play groups were not the only data collected at the trailer. Story telling sessions, descriptions of movies shown immediately before in Spanish or English, ethnographic semantics interviewing, and language tests based on Slobin (1967) provided additional data. However, this report relies primarily on the tape recordings of natural discourse as in general we found that the children's productive capability was not accurately reflected by their responses to formal elicitation techniques. The difficulty may be illustrated by a brief discussion of our experience with the Berko morphology test.

The Berko morphology test uses cartoon figures labelled by invented words which are nonexistant but phonologically possible in the target language. A few real words and their normal referents are also included in the test. The test uses nonexistant words in order to determine whether the child has learned the principles of noun and verb morphology as opposed to having memorized individual items. An example of a portion of the test sequence in English is as follows:

> This is a wug
>
> Here is another wug
>
> Now there are two
>
> There are two _______?

The child is expected to supply the response wugs (/wʌgz/). Although the Berko test is easy to administer, seems to hold the attention of the children, and is widely used, we are uncertain exactly how to interpret the data derived from it. The children failed in many cases to generate appropriate forms for the real words which were included as part of the test, yet in natural discourse produced the appropriate forms of these words, often immediately before or after the test. This fact suggests that although care was taken to make the testing situation as casual as possible, the children may have felt it to be threatening and grabbed for a safe repetitive response strategy rather than looking at each item as presenting an interesting problem to be solved afresh creatively.

Equipment

Three four-channel tape decks were acquired for use in taping and for transcriptions. One such deck was used in conjunction with four wireless microphones and receivers operating on separate frequencies. In this way, four individual children could be recorded discretely, along with any material picked up in the vicinity of the locations of the four microphones, without restricting the children's movements. Once the children were accustomed to wearing these miniature transmitting units, they appeared to quickly disregard their presence. Reliable range between the Edcor PM-1 wireless FM microphones and their respective receivers is about one hundred feet, depending upon obstructions, when the factory supplied whip antenna is installed on each receiver. However, this range was considerably increased by substituting various external beam or single element antenna configurations in much the same way television reception is upgraded by the use of an outdoor antenna.

At the elementary school, for example, a two-element vertically polarized 35 MHz yagi was designed and installed high above the building in the belltower. The feedline was about 60 feet of 75 ohm coaxial cable. A four-set coupler intended for use at television frequencies served satisfactorily as a splitter for the four receivers. At the school, receivers and recording equipment were hidden in a small closet out of reach of the curious school children. Reception of signals was generally excellent from all classrooms, halls, bathrooms, and even from many areas of the playground using this technique.

At another installation, a local park, a distance of about 400 feet from the antenna to the receiving equipment in the mobile home was covered with 300 ohm balanced twinlead because of its light weight and low loss of signal. A balun was used at the receiving end to convert the signals to a usable form for the coupler and receivers. In this case, the antenna was about 80 feet above the ground near the edge of the park in a tree. A radius of nearly 500 feet could be covered in this way, but atmospheric noise and commercial and industrial two-way radio services limited the use of this method. Such interference would be a severe problem in heavily populated areas, and we recommend that industrial frequency allocations be carefully researched for the area of intended use of wireless microphones before a large investment is made.

In addition to the wireless microphones, the staff made extensive use of a portable reel-to-reel tape recorder and a high quality miniature cassette recorder for use in a car, home or where mobility of the subject was not a problem. After nearly two years of taping, approximately three hundred reels of tape and cassettes had been consumed.

Several other techniques were tried and used to varying degrees. Often in the mobile home four omnidirectional microphones were used in the area where the children were playing, and these were connected directly to the four-channel recorder. An Electrovoice "shotgun" microphone was borrowed for a short period, but it was decided that the cost was not worth the use it would have gotten. This type of microphone is capable of picking up conversations up to 300 feet away by aiming it at the subjects. Ideally, a microphone of this sort is most useful when used with elaborate and expensive audio active filters which remove noise, and it should not be thought of as a device capable of performing miracles in the field of sociolinguistic data gathering. Unfortunately it is a very threatening device in appearance, and pointing such an instrument surreptitiously at people seems to have a negative effect upon their behavior that a television camera does not.

Although video-tape equipment was at our disposal, we actually used this medium very infrequently. We found it to be disruptive among kindergarten children, and the use of observational comments either written or spoken into one of the four wireless microphones was generally favored.

Chapter II

DEVIATIONS FROM STANDARD ENGLISH AND SPANISH

In this chapter we analyze the deviations which occurred in the English and Spanish of our informants in order to provide information bearing on the controversy between the proponents of Contrastive Analysis and Error Analysis concerning the role of one language as a source of error in another.

During the 1940's and 1950's with the help of behavioral psychology and structural linguistics, the Contrastive Analysis Hypothesis was developed as an attempt to predict and prevent the errors occurring in one language because of interference from another. Although the Contrastive Analysis Hypothesis is usually associated with first language interference in the second, it is also relevant to second language interference in the first and the interference of either language in the acquisition of both simultaneously.

W. R. Lee (1968:186) describes some assumptions generally associated with the Contrastive Analysis Hypothesis and its relation to language learning.

1. The prime cause, or even the sole cause, of difficulty and error in foreign language learning is interference coming from the learners' native language;
2. The difficulties are chiefly, or wholly, due to the differences between the two languages;
3. The greater these differences are, the more acute the learning difficulties will be.
4. The results of a comparison between the two languages are needed to predict the difficulties and errors which will occur in learning the foreign language.

John B. Carroll (1968:118) looked at the relationship between Transfer Theory in psychology and language learning. He found that the most psychological experiments on transfer dealt with situations in which, "the new set of habits was intended to replace rather than merely supplement the original set of habits," but concludes nevertheless that steps can be taken to minimize what he calls negative transfer and maximize positive transfer.

Other subscribers to the Contrastive Analysis Hypothesis are Lado, Fries, and Harris. They say respectively:

> The plan of the book rests on the assumption that we can predict and describe the patterns that will cause difficulty in learning by comparing systematically the language and the culture to be learned with the native language and culture of the student. (Lado, 1957:preface).

> The most efficient materials are those that are based upon a scientific description of the language to be learned, carefully compared with a parallel description of the native language of the learner. (Fries, 1945:9).

> ...it may prove possible to acquire a language by learning only the differences between the new language and the old (leaving those features which are identical in both to be carried over untaught). (Harris, 1954:259).

Teachers, however, soon found that teaching materials and methods based solely on contrastive analyses were inadequate as many predicted errors never showed up in their students' speech while errors not predicted did. Teachers also found that Arab students, for example, had no more difficulties in learning English than say Spanish-speaking students, in spite of a greater so-called difference between English and Arabic than between English and Spanish. Teachers also found that second language structures similar to the first language structures were not necessarily easier to learn than second language structures not similar to those of the first.

Not only have practitioners been dissatisfied with the Contrastive Analysis Hypothesis, but several researchers have also begun to question its validity. Fathman; Taylor; Dulay and Burt; Schachter and others have sought empirically to test the validity of the Contrastive Analysis Hypothesis by controlled experimentation. In her paper, "Language background, Age and the Order of Acquisition of English Structures," Ann Fathman found that neither age nor language background changed the order in which structures were learned. Fathman compared the speech of Koreans and Spanish speakers who were learning English. If the Contrastive Analysis Hypothesis were true, we would expect Spanish speakers and speakers of Korean to each have special problems. Fathman, however, found that, "The majority of the errors made....was not the result of transfer from another language." (1975:42).

Barry Taylor has looked at overgeneralization and transfer learning strategies by both elementary and intermediate Spanish speaking students learning English as a second language. He found that although elementary students relied more on native language transfer than did the intermediate students, both groups relied more on native language tranfer than did the intermediate students, both groups relied more on overgeneralization than transfer.

Since 1972, Dulay and Burt have been seeking to find universal innate mechanisms in child second language learning. In their study, "Natural Sequences in Child Second Language Acquisition," they compared the acquisition of English functors by Spanish and Chinese-speaking children and claim from their investigations that, "Regardless of first language background, children reconstruct English syntax in similar ways." (1974:37)

Dulay and Burt, Fathman, Taylor and others have found that native language has no significant effect on the acquisition of structures (syntax and morphology) of a foreign language, despite previous assumptions made by the Contrastive Analysis Hypothesis. It is possible, however, that native language may play more of a role in the acquisition of phonlogy. (See

Scovel's paper, "Contrastive Analysis is Alive and Well and Living in Phonology.")

Most second language acquisition researchers agree that contrastive analysis can have an _a posteriori_ role- one of accounting for some errors instead of attempting to predict them. Jacquelyn Schachter, however, points out in her paper, "An Error in Error Analysis," that, "... the _a posteriori_ approach obscured the fact that Chinese and Japanese learners (of English) have more difficulty with relative clauses and therefore avoid them, a fact predicted by the _a priori_ approach." (1974:205). In any event, it is generally accepted that the native language may _account_ for certain errors, especially in pronunciation, although it does not seem to be the main cause for error at any linguistic level.

Moving from the theoretical to the practical level, when one is confronted with a form which deviates from the standard language there are three important questions one must consider:

1. Are the utterances actually erroneous? For example, one can easily say that the target language is English, but precisely what sort of English are the children trying to speak? The results are quite different if we assume Standard English (as perhaps encountered on the television) than if we assume uneducated Central Illinois farm worker English. The same child might well be targeting one language at one time but another at a different time so care must be taken to define clearly the situation in which the deviation from Standard English occurred in order to determine whether it is in fact an error.

2. What is the source of the errors? Random performance errors occur in everyone's speech. In order to claim that a set of errors is due to an individual's use of a divergent grammatical model it must be shown to be recurring and systematic and a cause should be found to make the claim convincing.

3. If a bilingual's model of a language does diverge from the model of a monolingual adult, what is the explanation for the divergence? The errors may be developmental, similar to those of a monolingual child, or they may be the result of interference from one of a bilingual's languages on the other.

In organizing our data for analysis, we followed the general format used by Cohen (1975) in his chapter on "Deviations from "School" English and Spanish Grammar" except that we have separated the Spanish and English errors into separate major sections since for the most part the errors do not parallel one another in a reasonable manner and in general do not seem to be interrelated. We have also appended a section on phonology under each language.

1 English Deviations from Standard

1.1 Noun Phrase Constituents

1.1.1 Noun

1.1.1.1 Number Morphology in Nouns

Errors were infrequent in natural discourse. However, a few occurred in the plural derivation of the younger children.

(T,5): feets

(LM,5): Miss H__, you two cookie?

(DA,5): I done it two time

(DA,5): Oh, I don't got any ace

(RG,6): Put all the monkeys piece over here.

(HC,7): two camel

On the Berko morphology test, errors were common.[1] In English the regular plural morpheme has three phonologically conditioned allomorphs: /əz/ which occurs after sibilants and affricates (churches, buses, bushes, gorges, breezes, garages); /s/ which occurs after voiceless sounds which are neither sibilants nor affricates, and /z/ in all other circumstances (i.e. after voiced sounds which are neither sibilant nor affricates). Those nouns on the Berko morphology test whose plurals should have been formed with /-əz/ were overwhelmingly left unmarked for plurality (that is the children gave the same form for the plural as they were given for the singular). Only one child, PA, a fluent eight year old bilingual, used the /-əz/ plural in as much as 67% of the cases which called for it. A second child, LpS, also a fluent eight year old bilingual, used it 50% of the time. A third child, TA, seven years old and also fluent bilingually, used it 33% of the time. The rest used it less than 1/3 of the time, almost half not at all. Where the plural morpheme ought to have been expressed by the addition of /-s/, the children did much better. Only one child, LS, gave evidence of complete lack of knowledge of when the /-s/ plural was required; although almost half omitted it at least once. No child consistently failed to use the /-z/ plural where it was appropriate.

Interestingly, no errors in plural formation resulted from an inappropriate choice of one of the three phonologically conditioned alternates discussed above. All errors were the result of the omission of any plural marker. However, in these childrens' dialect, final /s/ and /z/ are weak no matter what their morphological status. Consequently, it is possible that their absence in plural constructions is the result of a phonological deletion rule rather than a grammatical error. Note however that the /∂z/ plural alternate is a form which is unlikely to be deleted by a phonological rule; therefore, its absence in plural constructions is probably symptomatic of a grammatical immaturity. Table 1 summarizes results from the Berko methodology test.

Table 1

Noun Plurals

allomorph	omitted by					
	junior		middle		senior	
z	18/40	(45%)	7/39	(18%)	0/17	(0%)
s	7/15	(47%)	3/13	(23%)	0/6	(0%)
əz	37/39	(95%)	41/46	(89%)	14/24	(58%)

Table 1 indicates omission of noun plural markers by various ages of informants. For example, in the sample of speech considered there were 39 instances in which junior informants should have used the /-əz/ allomorph of the plural, and they omitted it in 37 of those instances (95%).

1.1.1.2 Number Agreement

1.1.1.2.1 Demonstrative Number Agreement

There is also some evidence that some of the younger children lack the plural form of the demonstratives or are uncertain of its use. As with nouns, they appear to follow the strategy, when in doubt use the singular.

(LS,5): We got one of this.

(LS,5): This two have more.

1.1.1.2.2 Number Agreement across Noun Phrases

In several cases, number agreement fails to hold where the nouns which should agree are in different noun phrases, such as

(TA,9): There is no such things as witch he said.

(TA,9): That's the trees I'm missing.

(RG,7): Put all this here..You can put it..The monkeys.

(MyS,8): ..he had some ammunition to..to kill him, but, and the throwed them back at him.

It is difficult with the evidence we have at hand to determine whether these errors reflect divergent grammatical competence or are simply random performance errors. The best method of resolving such a question is to refer to the metalinguistic judgment of the speaker asking for example which is better: "there is no such things as witches" or "there are no such things as witches." However, our children did not respond well to this type of interviewing.

1.1.1.3 Mass vs. Count Nouns

A few errors occurred involving confusion of mass and count nouns such as

(SS,6): Look at how many I got (referring to money)

(EC,8): I take this much (referring to cookies)

(HC,8): Oh, I don't want those popcorns.

(HC,8): There's too much people over there.

(CS,6): A popcorn.

Cohen (p.177) regards errors of the above type as typical child language problems rather than Spanish influence. However, we may note that Spanish does not make the distinction which English makes between much and many, which may account for the fact that bilingual children who are fluent in English and have been so for several years make frequent errors in their usage which a monolingual English speaking child of comparable fluency is unlikely to do.

1.1.1.4 Genitive of Nouns

Errors in forming the genitive are of three types: use of an incorrect allomorph of the -s genitive

(NS,10): /ðə nIdz/ (/nIzəz/)

(HS,12): /ðə nIʒz/ (/nIzəz/)

(EC,8): /ðə wʌgzəz/ (/wʌgz/)

incorrect perephrastic construction

(MS,9): from the niz

(MS,9): from the bik

(LS,5): from the niz

and complete omission of any genetive marker

(D,4): Look at Jeresa name

(PA,8): It must be Malcolm

(LS,5): My brother

(SS,5): Lady hat

Date from the Berko test indicates that incorrect genitive formation of all types is largely the result of incomplete mastery of the morphophonemic rule governing the form of the -s genitive. It seems that the children's preferred strategy is to use the s-genitive if they feel they can produce the correct form. Otherwise, they use the incorrect paraphrastic form or omit any genitive marker.

In the Berko test, three of the children avoided the s-genitive entirely. As was the case with the plural, the /-əz/ allomorph fared the worst, being used correctly by only three children (one of them the youngest - DA) and being omitted entirely by eight. The /-s/ allomorph was used correctly by six and was omitted by two, while the /-z/ allomorph was used correctly by 10 and omitted by four. Our Berko data on genitive forms are much sparser than those on plurals and the difference between the /z/ and /s/ forms is probably not significant, although the lack of the /əz/ probably is.

1.1.2 Pronouns

1.1.2.1 Omission

1.1.2.1.1 Subjects

Cohen found only two cases in which the subject pronoun was omitted. We found a relatively large number, e.g.

(RA,3): (I) can't see.

(HC,7): (I) keep it in my hideout.

(CS,6): (I) fall down in Chicago.

(SS,6): What (did you) say?

They almost couldn't buy any shoes.

(TA,8): (They) went to the doctor.

(T, researcher): What's wrong with her?
(D,4): (She's) sick.

(RG,6): (it) doesn't fit in my neck.

(GG,10): Doesn't (it) go like that?

Over half of our examples were omission of I, which ties in well with its frequent omission in Spanish as reported by Cohen (p.177). Most of the remaining omitted subject pronouns should have been it. This may be largely due to phonological reduction of it to t, which merges with surrounding consonants in many cases such as

it doesn't → t'doesn't → doesn't

1.1.2.1.2 Objects

Direct objects are omitted frequently by younger children. It is notable that all our examples of omitted direct objects should have *it*, e.g.

(LM,5): Me no like.
(JV,5): Look, I found.
(D,4): Give me.
(TA,8): The mother didn't have enough to afford.

1.1.2.2 Double Marking

In the dialects of English with which our informants came in contact, double marking of subjects is common. Thus, this sort of "error" actually indicates good learning of the surrounding variety of English.

(RG,6): Santa he didn't bring me some toys.

(HC,8): This man he knows how to gling.

Double marking, in some areas, involved code switching and appears in these cases to be done for the purpose of focusing on an element of the sentence, e.g.

(EC,8): Este Ernesto, he's cheating

(TA,8): Este Javier, he came to our house yesterday.

In one case the direct object was omitted and a copy of the indirect object inserted:

(CS,6): Bring me here to me! (demanding popcorn).
I tol' you bring me here!

1.1.2.3 Case Errors

Objective case forms are used in place of nominatives as in:

(Miss H., Teacher): Martina, how old are you?
(PM,5) : And me this (holding up five fingers)

(MG,9) : Them are yours.
(RM,10) : Where's them - What's it called?
(LM,5) : Me color this?
(LM,5) : Me no like.
(MS,7) : Hey Nick look what me and Tibaldo done.

The use of *them* as a nominative is usual in the English dialect spoken by Anglos in this area as is the use of *me* in compound noun phrases especially when embedded in object position. The use of *me* in subject position in a noun phrase containing only one noun is a common error of very young children in first language acquisition and it occurs in our data only in the speech of those in the initial stages of the acquisition of English as a second language.

Like Cohen, we found several genitive pronouns replaced by nominative forms, e.g.

(CS,7): Here's you dog.
(LS,6): What color he clothes.

CS replaced *your* with *you* in a large number of cases. She also once replaced *his* by *him's*.

In one case, an incorrect paraphrastic genitive was replaced by a paraphrastic dative:

(J,researcher): OK, now it's Leti's turn.
(SS,5): After Leti, it's to me.

As could be expected, whom was not used, e.g.

(GG,10) For who?

1.1.2.4 Gender Errors

In a number of cases, gender-marked pronouns were used with referent nouns of the wrong gender, e.g.

(HC,7): This is a bell. He is ringing.

(SS,5): She sick (refers to a boy)

(SS,5): He have a __ (refers to a girl)

(LS,5): He didn' got no baby, that momma.

*(TA,8): She had all the candies and it hurted it too much she couldn't even close her mouth.

It seems unlikely that errors are due to the children's Spanish-speaking background as the Spanish gender system is much more prevasive than the English. These errors are restricted to the youngest children (if we remove Tibaldo).

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* This may be a phrase order problem rather than a gender problem - i.e., it may refer to mouth.

1.1.2.5 Number Errors

We found only one example of a pronoun used in the wrong number:

(SS,5): Oh, Daddy have it (should be them - refers to matches).

1.1.2.6 Relative Deletion

Cohen found several children who omitted relative pronouns inappropriately. In our data we have only one such omission

(MyS,7): And then this other man was drunk, was in back of the other man, and he was invisible.

Note, that this sentence could be made acceptable by insertion of who in either of two places or by insertion of and.

1.1.2.7 Reflexive Errors

Several children failed to reflexivize pronouns appropriately, e.g.

(ES,12): He said he was gonna pour some soup on his plate, on his bowl I mean, and instead of the bowl, put it on him.

(CS,6): You eat by youself--by you.

The source of the following sentence is not clear, therefore we cannot say exactly what the error is,although it seems to be a reflexivization error.

(HC,7): Who wants to rob the bank by their own.

1.1.2.8 Possessive/Article Errors

In Spanish, the definite article is used to express possession in many cases where English would require a possessive pronoun. Cohen (p.181) found several such examples, we found only one:

(T, researcher): And what this that you're holding the milk in?

(T,4): With the hand.

This seems to be a good example of Spanish influence in English.

1.1.2.9 Article for Pronoun

In the sentence

(MyS,7): he had some ammunition to..to kill him, but, and the throwed them at him.

the definite article is substituted for the pronoun he. It seems possible that this is due to confusion resulting from their phonological identity in Spanish - el = the and he.

1.1.2.10 Possessive Adjectives

The possessive adjective was omitted in only one of our examples

(SS,5): Put you hand on mouth.

1.1.3 Determiners

1.1.3.1 Articles

1.1.3.1.1. Number Errors

In English, number is marked only in the indefinite article, and is clearly marked only in the singular, i.e. a trees is unambiguously a number error, whereas tree may be either omission of the category 'article' or may be incorrect use of the zero allomorph of the plural indefinite. Note also that a trees could be the result of a number error in either the article or the noun--context is required to tell which. Examples from our data are:

(MS,10): A cartoons

(CS,6): You see a pretty cheeks.

1.1.3.1.2 Definite/Indefinite Errors

The use of definite vs. indefinite articles in English is more complex than it seems to native speakers--there are syntactic constraints in addition to the semantic definite-indefinite dimension, in that a number of semanticly definite noun phrases do not allow definite articles. Incorrect use of definite articles is quite typical of non-native speakers.

(RP,9): You like the boys

(SS,6): They tell me in the school about those.

(SS,6): One little girl bring it to the school.

(LS,5): There was the three little ducks.

(HC,7): Marcy's got a shot on the both arms.

In Spanish, the definite article would be required in these constructions.

In many cases a definite article was used in a position semanticly demanding an indefinite as in:

(TA,8): A guy hitting the log and a woodpecker came by. (the log had not been previously identified)

In several cases, this, rather than the indefinite article was used to introduce a major character (as is normal in English storytelling, even though it is ungrammatical).

(ES,12): There was this scientist who was a doctor,...

(NS,10): There was this train that came by.

(ES,12): There was this train...

1.1.3.1.3 Omission of Article

A number of younger children frequently omitted the indefinite article in answering "what's this" questions elliptically. Although this omission is not grammatical in standard English, it is quite common among English speakers in general when responding to questions or series of questions whose appropriate answers are long lists of items. The children discussed here have generalized this response pattern to situations in which only a single item is called for as an answer. Examples are:

(I,researcher) : What's this Dora?
(D,4) : Circle?

(T,researcher) : What are these?
(M,4) : A cross, a circle, a square, rectangle, straight line, a triangle, oval.

(T,researcher) : What is this Marta?
(DZ,4) : A quarter.
(J,4) : No, nickle.

(E,researcher) : A big house?
(CS,6) : Big one.

The indefinite article is also omitted in more spontaneous utterances:

1. (R,4): I got bunny rabbit.
2. (D,4): Dezima is baby.
3. (R,researcher): An' the ball is gonna be hot potato.
4. (TA,7): I tol' him thousand times.
5. (RG,6): Not pennies--nickle and dime.
6. (MG,9): Is this trap?
7. (LM,6): Doña Marta is helping hand.
8. (RA,4): Pati see I got truck
9. (HC,8) I don't want shot.

Note that the above omissions of the indefinite article as opposed to those previously cited would be highly unlikely to occur in the speech of a child acquiring standard English as a first language. Such omissions occur in first language acquisition only at the early stages before utterances are as complex as those cited above. In second language learners such omissions seem to continue through much later stages of development. Number 3 above is a good example of this phenomenon, as it was uttered by one of our Latino research assistants who was quite fluent in English, but had learned it as an adult. Examples 2 and 7 may reflect Spanish influence as the indefinite article is omitted in Spanish with unmodified predicate nominatives denoting occupation or nationality.

In a number of cases the definite article is omitted in prepositional phrases

(TA,8): I mean she went to dentist.

(LS,6): I need this thing from garage.

(LM,5) : ...an go to washroom.

(SS,6) : I know a story of Wizard of Oz.

Cohen finds such omissions with subjects and direct objects, and none in prepositional phrases. He attributes the omission of the before other to Spanish influence. We also find one example of omission of the before other:

(NS,11): Then turn them other way.

and one sentence which may involve omission of the definite article in a noun phrase including an adjective

(T,researcher): Where is the dog?

(J,4): Here is dog chiquito. Here the dog.

In this case it would appear that the child's ability to generate a sentence was subject to a stringent length and complexity constraint and inclusion of the article in the first utterance was beyond the child's generative capacity. However, the article may also have been omitted because the child had not completely mastered the rules governing code switching and was uncertain about which language should be chosen for the determiner in this sentence which involves a Spanish adjective in Spanish position in an otherwise English sentence.

1.1.3.1.4 An/A Errors

A typical child language error is the use of the indefinite allomorph a before vowel-initial words where an would be appropriate. However, such errors are found not only in the speech of the youngest children but also in that of the oldest. Examples are:

(LS,5): We have a accordian..a organ too.

(RP,10): No Maria already gots a old boyfriend.

1.1.4 Nominalizations of adjectives

In a number of cases adjectives are incorrectly nominalized, e.g.:

(LS,5): Where's the other this?

(PG,5): This mine big?

(HC,7): They got to the nother of the hill.

In English some adjectives can be used as nouns without addition of one as in:

Put the reds here.

In Spanish any adjective may be so nominalized. The children's incorrect nominalizations are probably the result of incorrect generalization of the English nominalization rule under influence of the Spanish rule.

Note that two of our examples involve the demonstrative adjective this. As the data in section 1.1.1.2.1 also indicate, the demonstratives seem to be a major stumbling block in the children's acquisition of standard English grammar. In the example "This mine big." there is also a pronominalization of the possessive adjective my.

1.2 Verb Phrase

1.2.1 Verb

1.2.1.1 Present Tense Inflection Problems

Omission of the third person singular present tense marker was quite common in the natural discourse of the younger children while non-existant in that of the older children. Examples are:

(SS,5): He have a mother and a father
(SS,5): He look like that
(DA,5): That boy like to speak in Spanish a lot
(LS,5): The bumblebee go bzz
(CS,6): This go here
(CS,6): Jim love girls
(RG,6): Nobody love me

Such omission may result from overgeneralization of the observation that there is little inflectional marking of person and number in English verb morphology especially as compared to Spanish. However, our data from a set of controlled conversations indicate that the children have generally mastered the rule for the formation of the third person present tense of verbs although some allomorphs are better learned than others. As is the case with the plural of nouns, the z allomorph is handled best and the əz allomorph worst, although the children have somewhat less trouble with the əz present than with the əz plural (compare section 1.1.1.1.). Table 2 summarizes our data from the Berko morphology test.

Table 2

	omitted by					
allomorph	junior		middle		senior	
z	4/14	(29%)	0/8	(0%)	0/7	(0%)
s	5/6	(83%)	1/3	(33%)	0/1	(0%)
əz	3/4	(75%)	6/6	(100%)	0/4	(0%)

Note that in several cases the younger informants altered the pronunciation of a word root so that it required a *z* present rather than one of the more difficult ones.

It is possible that the children's discourse errors indicate not an incorrect generalization but rather a stage in acquisition in which verb inflection is not automatic but requires reflection. Its omission may reflect a simplification strategy which the child uses in coping with the complexities of discourse.

Clearly, omission of the third person singular marker in the present tense is not simply due to a phonological deletion rule since it occurs with the verb to have which has a suppletive form has in the third person singular present tense (which never occurs as *haves). In general, however, the final s in these children's dialect is weak and indistinct. (This feature may be due to influence from the phonology of Chicano Spanish, which also has a weak final s.) We would suggest that the phonological suppression of the marker of a category in most cases could lead to the eventual loss of the category and its markers in the remaining cases ((cf. Meillet 1970:61-5).

Use of the uninflected from with the contracted negative (he don't) is usual in the dialect of English to which the children are exposed outside the school, and occurs in the speech of the older children as well as in that of the younger children.

(HC,7): He don't want nobody to see his dirt.

(ES,10): He don't even know how to play checkers.

One informant evidently felt this to be wrong and inserted a marker, but in the wrong place:

(MS,9): She don't wants to.

Got in standard English occurs in verbal constructions with the auxilliary verb have. Due to phonological deletion rules, constructions like he has got can be reduced to he's got. In rapid speech the 's (/z/) may be deleted giving he got, but for the SE speaker there is still an underlying representation of the auxilliary have. However, it appears that the children studied (at all ages) perceive forms without overt marking of the auxilliary have as lacking such markers entirely and thus perceive the verbal form got as a regular verb with a full conjugation as well as a form to be used with the auxilliary have. Thus, we find got being used in the present tense:

(LS,5): We got one of that

(LP,11): You got pencils?

(R,4): I got bunny rabbit

(M,4): She got a clean plate*

(LS,6): He got paper

(ES,11): Somebody got it

(LS,6): Malcolm gots a girl friend

(MG,8): He gots some

(MS,6): Nicu gots a bike

* Note that in the third person singular present tense got occurs both with and without the inflectional marker -s.

Got also occurs in negatives and questions where the grammar of English requires do-support (see section 1.2.1.2.4). As in the case with other verbs, do is usually present in negatives and lacking in questions, as in:

(DA,5): I don't got any ace.

(MG,8): She doesn't even got a gun.

(MG,10): Hey, you got water or something?

(LS,6): How many children you got?

(LP,12): You got pencils?

(R,4): You got a can?

Note that in questions do is phonologically very reduced in the rapid speech of native English speakers becoming /d/ or /əd/ whereas much less reduction takes place in negatives. Labov (1969b) has found that speakers of Black English Vernacular omit the copula just in those environments in which it can occur in contracted form in the speech of standard English speakers. We suggest that do omission in questions is an analagous phenomenon i.e. omission of a form in a dialect which occurs in reduced form in the standard language.

1.2.1.2. Omission of Helping Verbs

1.2.1.2.1 Omission of the Copula *be*

The copula was frequently absent in the speech of those children who were in the initial stage of English acquisition. The following utterances are illustrative:

1. (J,4): Here is dog chiquito - here the dog.
2. (RA,4): Here my windows.
3. (RA,4): Here my door.

4. (M,4): My name Marta.
5. (T,5): My daddy's name Jose and my name Teresa.
6. (LS,5): The ice all gone.
7. (PG,5): This big one mine.
8. (CS,6): This one little.

9. (E,4): This cross
10. (RA,4): That you Pat.
11. (LS,5): This the sun.

12. (SS,5): I sick
13. (PG,5): They red
14. (LS,6): They're dily (dirty). They always dily.
15. (CS,6): You a skinny one. You fat.

16. (R,4): This nickle too?
17. (LM,5): What this?
18. (LS,5): What color he clothes?
    What color is this?
    Now what color this?

Examples 1, 14, and 18 indicate that copula omission may be a strategy for reducing sentence complexity to manageable levels. In all three there is alternation between presence and absence of the copula within a single turn of speech. In the first example the copula is omitted, in the second sentence a determiner is added to the noun phrase of the first sentence. In 14 and 18 an expansion of a previous sentence by the addition of an adverb is marked by the omission of a previously included copula. Finally, in 18 the first and second sentences differ in that the second noun phrase of the first sentence is more complex than the second noun phrase of the second sentence. The former consists of a possessive pronoun plus a noun and the latter of only a demonstrative pronoun. Concomitantly, we find that the copula is absent in the first sentence but present in the second. The fact that children who were fluent English speakers never omitted the copula is further support for the position that copula omission is attributable to developmental limits on sentence complexity as is the fact that copula omission is characteristic of the early speech of children acquiring English as a first language (Brown, 1973).

Certainly it would be difficult to make a case for the alternative explanation that copula omission by the children studied was due to interference. Copula omission is not permissible in Spanish; thus such omission in English cannot be the result of Spanish infleunce. Copula omission does occur frequently in Black English. It is possible that the speech of the six city children was influenced by this dialect as these children live in a predominantly black neighborhood. However, the other children studied live in a community with no black residents. Black English could have had no direct influence on their speech.

1.2.1.2.2 Omission of the Progressive be

Cohen (1975), Bartley and Politzer (1972), and Trager-Johnson and Abraham (1972) have all found that Mexican-American children frequently omit be with the progressive. Cohen suggests that this is a sufficiently regular phenomenon to identify it as a Chicano English dialect feature, just as it has been identified as a Black English dialect feature. Our data do not support this position. We have only sixteen instances of present progressive be omission in our entire corpus. All but two are from the speech of children in the initial stages of English acquisition. Examples are:

1. (R,4): We going in the house.
2. (D,4): Who speaking?
3. (RA,4): I making a big one.
4. (LS,5): He drinking milk
5. (CS,6): You wrecking it.

The two cases of be omission by fluent English speakers involve environments in which a very reduced form of be would be common and its omission therefore unsurprising:

6. (GG,10): How you doing in there?
7. (AG,7): Where you calling?

Brown, in an analysis of the acquisition of English as a first language states, "...in all the children the progressive is first expressed by -ing alone and, in fact this form reaches a criterion of 90 percent production in obligatory contexts before a single auxiliary be is spoken (1973: 253)."

Indeed of the fourteen grammatical morphemes studied by Brown, the auxiliary be was the last to be acquired. Menyuk, too, finds that omission of the auxiliary be occurs relatively late, "Alternation between the use of the contracted form of the auxiliary be and omission of the contracted form also occurs with preschoolers under the age of 3.6 ("I going" and "I'm going") (1969, 81)." Our data, together with that of Brown and Menyuk, suggest that among the children whom we studied, auxiliary be omission is not a dialect feature but rather a developmental feature.

Be omission does, however, appear to be a dialect feature in the future construction with going to pronounced gonna and occurs frequently in the speech of fluent English speakers, adults included:

1. (HC,7): When we gonna stop?
2. (RG,7): I gonna rob Cristina's money - I gonna get Cristina's dollar.
3. (AG,7): I gonna give Jim something
4. (MH, Teacher's aide): Dezima gonna share her toys with us

1.2.1.2.3 Omission of be with the Past Participle

In our data, be was omitted only before one past participle, namely in the construction "be supposed to" e.g.:

1. (RG,7): You supposed to see girls
2. (MH, Teacher's aide): Dezima we supposed to shave

Be omission here appears to be a local dialect feature, as it often occurs in the speech of fluent speakers of English.

1.2.1.2.4 Omission of do

In standard English questions, negatives, and emphatics, the marker for number and tense and that for negation must be attached to an auxiliary verb. When no auxiliary is present, a dummy auxiliary, do, which has no meaning, is provided by a rule commonly referred to as do-support in the generative transformation literature.

In first language acquisition, children go through a period in which this obligatory do is omitted producing sentences like:

Where (goes) the wheel (goes)?
Make it?
He's make it?
No do this
I no do this (Menyuk, 1969, 73)

Brown's data indicate that do support first starts to become established at stage III (mean length of utterance 3.4-3.6; age 25 months for Eve; 38 months for Adam and Sarah) and occurs in negative, interrogative and emphatic sentences. Menyuk's data indicate initial development of do support between 2,10 and 3,0 years again in all three sentence categories. However, she did find examples of ill-formed sentences involving do-support occurring much later, for example, at age 3 years 5 months "What does this does?" and at 3 years, nine months "Why you do with this?"

Do omission by the bilingual children studied was similar to that reported for first language learners. Just as negation is initially expressed with a negative particle in first language acquisition, so too was it expressed by the children:

(J,4): I no go
(M,4): I no want one
(D,4): You no see me under the table

(T,5): She no wanna go to the school.

(CS,6): You no catch me

(CS,6): You no know my head where is it.

However, for first language learners, by stage III (MLU 3.4-3.6), auxiliary negation is becoming established while bilingual children whose mean length of utterance was as high as 4.75 still continued to use particle negation frequently . Two possible explanations come readily to mind. First, the bilingual children we studied were substantially older than monolingual children are at the onset of the acquisition of English - three years and above as opposed to under two. Their consequent greater cognitive capacity would enable them to construct sentences which are longer and semantically more complex than those of monolinguals at an equally early stage in English acquisition, yet syntactically they might have to proceed through stages similar to those of monolinguals. An alternative explanation to that of accelerated semantic development is retarded syntactic development. Spanish forms the negative with a negative particle no. Therefore, it is possible that the presence of particle negation in semantically rather complex utterances of bilingual children is due to interference from Spanish. With the evidence at hand, it is impossible to exclude either explanation. Studies of the acquisition of English as a second language by children in whose first language negation is expressed differently from Spanish would help us to select the correct explanation. Unfortunately, such studies are not available.

Just as Menyuk found among monolingual children, errors involving do support occurred in the speech of the bilingual children even after the rule was well established in their grammars. Examples are:

(MS,7): She don't wants to

(TA,8): Then he says, "Why don't you scare of me?"

(TA,8): Why do you wasn't scared.

Errors like those above were rare and appear to be performance errors[1] characteristic of immature speakers, but two categories of errors occurred frequently. The first involves incorrect number marking on the auxiliary:

(EC,9): Those pinatas doesn't get no...

(PA,9): He don't know how to draw

The second involves the use of never instead of do support when a single negative instance is referred to emphatically:

(ES,11): I never even got finished

(MG,9): You could've jump me there and made a king but you never think pretty good

Both the latter types of deviation from Standard English appear to be dialectal patterns.

Do support also seems to be missing or incorrectly applied in the initial questions of the bilingual children:

(SS,5): Again Jim. What say?

(SS,5): What did you done?

(CS,6): Where you put it?

(CS,6): What you say?

and occasionally in the more complex questions of more fluent bilingual children:

(DA,5): Where do I put the glue? Right here? Where do I put the glue? Here I put the glue?

(EC,7): Did all the girls ate all the popcorn?

(HC,8): Did you started to cry?

---

[1] These errors are labeled performance errors as opposed to competence errors as the children were capable of correcting them when queried.

Surface do also is missing in some non yes-no questions of fluent bilinguals. Here, however, it looks as if its absence is due to a phonological rule:

(EC,8): How d'ya take this off?
How ya take this off

(NS,10): Which one you wan'take

(PA,9): What I do?

In rapid speech the do in each of these sentences is reduced to /d/ or /ǝd/, and it appears that the children have an optional phonological rule further reducing these forms to zero.

1.2.1.3 Omission of the Present Participle Marker

Our data include several examples of omission of -ing from the present participle. Cohen (1975:193) states that this deviation from standard English is developmental in nature rather than dialectal or the result of language interference. We agree with this analysis as our examples

(RG,6): Why you cry baby?

(T,interviewer): What are you doing?

(T,5): Close the cake

come from the younger, less fluent children studied, and the same phenomenon may be seen in the early speech of monolingual, English speaking children.

1.2.1.4 Omission of the Future Marker

The future may be marked either by will + infinitive or by be-pres. tense, number + going to + infinitive (be-pres. tense, number + gonn(a) + infinitive in the dialect). Will as a future marker is usually reduced to /-l/ in the non-formal speech of monolinguals. The bilingual children appear to have an optional rule which deletes /-l/ altogether. Such /-l/ deletion occurs in the speech of children of all ages but in the speech of none of them all the time.

Similarly the be-pres. tense, number of the future usually occurs in contracted form, reduced to a single phoneme, in the non-formal speech of monolinguals and also appears to be omittable through an optional rule in the speech of the bilingual children. Be deletion like will deletion appears to be a dialect feature (morphophonemic in nature) rather than a developmental feature as it occurs in speakers of all ages and degrees of fluency.

Going + to undergoes reduction in the speech of monolinguals, but more than a single phoneme remains. Interestingly while we find that going + to was occasionally omitted in a future construction, such omission was quite infrequent and occurred only in the speech of young children whose English was not fluent and rarely there. Thus it appears that the omission of going + to is developmental in origin.

Examples of will omission are:[1]

(SS,6): I go with you

(CS,6): I call you first

(LS,5): I tell you that color from that

(EC,8): I take this much

---

[1] The context makes it clear that in all these examples the future rather than the habitual present was the underlying meaning.

(HC,7): I take four

(TA,8): I fix it myself

(RP,10): OK, We play with that ball. An' we'll sit in a circle, an' the ball is gonna be hot potato.

Examples of *be-pres. tense, number* omission are:

(LS,6): Darn it. Now it gonna break.

(SS,6): I gonna call you, Jim

(AG,7): I gonna give Jim something

(HC,7): When we gonna stop?

(LP,12):[1] So what you gonna do about it?

Examples of gonna omission are:

(CS,6): I'm hit ya

(LS,6): I know how to. I'm get out.

---

[1] Note that *are* may be reduced to zero in this sentence by monolingual speakers of English in colloquial style. In wh-questions the copula carries reduced stress and is subject to complete reduction depending on the relation of its phonological shape and the surrounding phonological elements (e.g., *'m* seems to be irreducable, while *'re* can be removed in a number of environments.)

1.2.1.5 Incorrect Past and Past Participle

Both the regular and irregular past tense marker and past participle marker were frequently absent in the speech of the children. Data from the Berko morphology test for the regular past tense marker[1] are summarized in Table One below[2]:

Groups[3]

	I	II	III	IV
t	0/0	1/2	2/3	1/10
d	0/1	4/6	9/15	3/23
əd	0/0	3/3	8/9	9/16

Table One

Entries represent deviation tokens over the number of children in whose speech such deviations occurred.

In our data from natural conversations, past tense and past participle deviations from standard English account for 15.5% of all deviation tokens.

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[1] The regular past tense marker has the form -əd after t and d; -t after p, k, č, f, θ, s, and š; and -d elsewhere.

[2] As mentioned earlier, data from formal tests is only indicative and should not be relied upon heavily as many of the children responded very poorly to test situations. Often they simply repeated the elicitation form. In the Berko items designed to elicit the past tense, some children avoided the past tense by incorrectly using the past progressive instead.

[3] The children have been placed in four groups according to the investigator's subjective assessment of their English ability, group I being the least proficient, group IV being the most proficient.

The data are summarized in Table Two below[1]:

		I	II	III	IV
past tense marker omission					
	regular	1/1	7/4	5/3	6/1
	irregular	7/2	14/4	10/4	6/3
past tense					
	double marked	0/0	0/0	1/1	2/1
	regularized	0/0	1/1	1/1	4/1
past participle marker omission					
	regular	0/0	1/1	6/4	1/1
	irregular	0/0	0/0	0/0	0/0

Table Two

Entries represent deviation tokens over the number of children in whose speech such deviations occurred.

While there is some evidence that the children whose English is less proficient are more apt to produce past tense and past participle deviations, such deviations are still frequent in the speech of very fluent speakers of English as old as thirteen. This situation differs from that of the older, native English speaking child whose speech shows few such deviations, especially of the omission type.

Two different strategies might account for these deviations. In one strategy the past tense marker //D// is present at a deep level but is removed by superficial phonological rules. In the other, the simple past is marked by a zero allomorph. Since both strategies generally produce the same surface data, it is difficult to decide which of them the children are using. It is even possible that the same child may use both strategies at different times.

---

[1] The data presented here is also only indicative, as the groups do not have equivalent numbers of children. Group I has nine children, II has five, III and IV have ten each. Additionally some children were far more loquacious than others. Finally, we have not calculated the percentage of deviations as opposed to standard forms. We have not done so because we are here dealing with natural conversations. Consequently, utterances were not constrained and avoidance strategies may have been used where the child was uncertain of a form.

In support of the phonological deletion strategy, we observe that the children optionally reduce word final consonant clusters ending in *-t* and *-d* in English roots. We can therefore claim that the same phonological reduction rule may be applied to the tense markers *-t* and *-d*. However, although the phonological reduction theory accounts for the loss of *-t* and *-d*, it leaves unexplained the loss of *-əd*, as well as the occurrence of present forms for past tense forms of irregular verbs.

With respect to the irregular verbs it could be argued that the use of a present tense form where a past tense form is required arises out of confusion as to which of the several patterns of English tense formation applies to the verb in question. The choice of a zero allomorph may be seen as the simplest solution to the problem.

English verbs generally have three principal parts: the infinitive (present stem), the past, and the past participle. These may be found with any of several sets of endings and with or without changes in the stem, e.g.:

	weak			strong	
	regular	irregular	invariant	n-participle	0-participle
itive	jump	buy	put	drive	sink
past	jumped	bought	put	drove	sank
iciple	jumped	bought	put	driven	sunk

There has been a tendency since the earliest recorded stages of English for strong verbs to lose inflection and stem allomorphy and to conform to the regular weak paradigm (Quirk and Wrenn, 1957:40). This tendency as well as other complications arising from various dialect differences in Middle English (see Brook 1958:134-137), causes the principal parts of verbs to differ between dialect, colloquial and Standard English. This disagreement between different models of English even for the same verb makes it quite difficult for a language learner to find a strategy which will yield conect verb forms. We would suggest that this problem is magnified by the phonological deletion of -t and -d in our informants' speech.

The strategy most frequently cited in the literature in discussing analogical change (e.g., Bloomfield, 1933:406, Lehmann, 1962: 195, Arlotto 1972:139) is to make all verbs conform to the weak model as in:

(TA,8): She had all the candies and it hurted it too much.
(TA,8): Then he climbed up a tree, felt off.
(MG,10): He ain't crownded.
(RG, 6): I give you a card. I gived you a card.
(DA, 5): Miss H, she drawed that wrong didn't she?

If one knows either the past or the participle form of a verb, a simple strategy for deriving the other form is to assume it to be identical to the known form. (on a generalized version of the model of the weak verbs in which such identity holds). Such forms can be seen in:

(TA,8): He had it broke.
(L_pS,9): I seen it.
(DA,5): Miss H, look what Brad done.
(HC,7): Who done that?
(LS,5): But it's bloke [broke].

Note that all these forms occur in nonstandard dialects of English spoken by monolinguals.

A still simpler strategy is to ignore tense markers completely and use the bare infinitive (as in the invariant verbs such as put). It is interesting that our informants used this strategy much more frequently than the strategy of making all verbs conform to the regular weak pattern (see Table Two), the adaptation normally cited in the literature. Examples are:

(RA,3): We make this

(LS,5): We buy our own ice-cream.

(SS,5): One little girl bring it to the school.

(RG,6): I break my head

(HC,7): I lose it

(LpS, 8): Jim, I take water.

(MG,9): You should've think pretty good, wouldn't ya.

(NS,11): He stopped and see what was the matter.

1.2.1.6 Problems of Tense, Mode, and Aspect

Like Cohen (p. 196) we found a number of verbs which occurred in the wrong tense. However, he limited his sample to compound and complex sentences in which the two main verbs were in different tenses. We wish to include all sentences in which there are clear tense errors even those in which the evidence is provided solely by the context in which the sentence was embedded.

One common type of error involves a verb whose tense or mood should be governed by the grammar of the sentence but instead corresponds to the time of the action it describes. Examples are:

(Researcher): What would you do if you were a queen, Diane?

(DH,6): I'll kill everybody

(TA,8): The man said he had to go back to his cave, the cave they live, and they will leave together.

(TA,8): They let him kept the sweater

(Researcher): Pati, you want to hold this for me?

(PA,9): I won't mind.

Another type of error involves elliptical responses to questions as in the following examples:

(Researcher): What did she do?

(SH,5): Flies.

(Researcher): What are you doing?

(T,5): Close the cake.

Tense errors consisting of incorrect use of the present progressive also occurred, e.g.:

(HS,13): I'm thinking if you move one, I move one.

(RP,10): You're not getting nothing, I'm thinking first.

(RP,10): I'm not jumping back; I got you.[1]

A number of miscellaneous errors also occurred. Among them were:

(LS,5): The other girls when they go to the school, they be bad

(AG,8): I'll guess I won't. I'll guess I'll stay here

(MG,10): No but you can kill me you know cause if I should've moved you could've killed but i stead of ....

The first of these sentences looks as if it might be the result of influence from Black English Vernacular. However, LS has had no contact with BEV speakers. In fact it seems unlikely that any of the deviations from standard English in tense, mode, or aspect are the result of dialectal differences or interference. Rather they appear to be developmental in nature.

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[1] While RP's sentences could be correct in isolation, their content clearly showed them to be enoneous.

1.2.1.7 Omission of *to* with Infinitives

As Cohen (p. 197) observes, the use of *to* with English infinitives is difficult-for each verb a learner must memorize whether it embeds with or without *to* e.g., */ want him to go* vs. */make him go*. In Spanish too, one must memorize which verbs requires *a* and which do not. The fact that *to* and *a* may be equated in infinitival environments is a possible source of confusion in both languages as a learner trys to derive a reasonable correspondence and fails.

Consequently, it is not surprising that the children studied made mistakes with infinitival *to*. However, eventually the verbs which do take *to* are sorted out from those which do not. We have only one example of *to* omission in the speech of a child over seven, and it may be due to phonological reduction rules. Interestingly there are no examples of *to* insertion in the speech of any of the children.

Errors found in our corpus include:

(RA,3): I don't wan eat it.
(T, 5): I got do it again.
(DA,5): I wan take the checkers home.
(CS,6): I want ya sit down.
(SS,6): I go'n cut it.
(MyS,6): Bet you don't know how make a fire truck.
(HC,7): Who wants play checkers?
(NS,10): Which one you wan take?

Cohen (p. 197) argues that the fact that the Spanish structure is similar to that of English in such sentences as:

Fueron *a* jugar
They went *to* play

shows that a sentence such as:

They went play

cannot be explained by interference. We would argue that in this type of situation the interference consists in the confusion caused by the lack of exact correspondence in an area where there *is* a general parallelism of structure.

1.2.2 Prepositions

Prepositions do not have neatly defined semantic ranges. However, generally one meaning is perceived to be central. For example, while the preposition *in* occurs with widely varying meaning in such expressions as *in a bucket*, *in Spanish*, *in haste*, and *in 1947*, it is the spatial meaning found in the first expression which is cognitively most salient. The fact that one meaning of a preposition is perceived as central often creates difficulty for the second language learner, for based upon it he may establish correspondances between the prepositions of his first and second languages which fail to hold for the full range of meanings of the prepositions.

1.2.2.1 Incorrect Prepositions

As was mentioned previously, prepositions do not translate well from one language to another nor are there neat semantic rules governing their use. Consequently, prepositions are one of the greatest sources of error for second language learners. Moreover, preposition errors do not occur only in the initial stages of second language acquisition rather they are persistent. In our corpus preposition errors may be found even in the speech of the oldest, English dominant children. Examples of such errors are:

(CS,6): [I fell down] *in* the steps.

(TA,8): He felt down *in* rolling skates...

(ES,12): He hit him *on* the stomach

(ES,12): He said he was gonna pour some soup *on* his plate, *on* his bowl I mean

(RP,10): If I come without my brothers, I'll get in trouble *by* my mother.

(RM,10): How about if we say something bad an he gets mad with us?

(SS,6): I know a story of pigs, and I know a story of Wizard of Oz.

(AG,7): Oh, I'm good for fish.

(MG,10): She was all to pieces.

(SH,5): Don't knock [it] in pieces.

(LS,6): Here Rolando, you could make this to a airplane.

(LS,5): Get out from he brothers.

(RP,10): I have a note over our house.

(SS,6): They tell me in the school about that.

(E, researcher: Did your mom make your dresses?

(MS,9): Yeah, in the night.

(TA,8): He climbed at the tree where it was.

Cohen also found numerous preposition errors in the speech of the children with whom he worked. As he points out some like those involving in versus on (both en in Spanish) are due to interference. Others are the result of incorrect generalizations about distribution and are common to learners of English as a second language regardless of their first language background.

1.2.2.2. Preposition Omission

We found few cases of preposition omission, and those which did occur had no unifying theme. Examples are:

(RA,4): Get out my way

(Teacher): Where do they grow?

(O,4): tree.

(DA,5): Joe you're sitting on top the wire.

(DA,5): I did mine already and I give it ya.

(SS,5): He ride a car

Preposition omissions occurred predominantly in the speech of the youngest children and are probably developmental in nature.

1.3 Conjunction

As Cohen (p. 203) points out, run-on sentences using and are typical in English child language, and are to be considered accurate learning of the English to which our informants are exposed. Our children were not as strongly limited to and as were Cohen's, although they showed a clear preference for it. This preference included not only run-on sentences, but also use of and in sentences where but would have been more appropriate, e.g.

(ES,12): He said he was gonna pour some soup on his plate, on his bowl I mean, and instead of the bowl put it on him.

One of the other children occasionally substituted so for but. This is surprising as he is one of the linguistically more advanced children.

(TA,8): ...went to the doctor they have to give, give some money so they didn't have enough money so they came home.

(TA,8): He thought he was the strongest man in the world so the other people thought he wasn't.

1.4 Negation

Negation in Standard English involves a complex of interlocking rules which prevent the occurrence of more than one negative element per sentence, dictate the occurrence of any rather than some in certain positions, and shift the position of negated elements (see Klima, 1964).

1.4.1 Double Negation

Double negation was optional in Standard English as recently as Middle English. Its use was greatly restricted by Shakespeare's time, and it is now considered ungrammatical in Standard English (see Traugott 1972: 147-8). However in the non-standard dialects to which our informants have been exposed double negation is the norm as it is also in their first language, Spanish. Consequently, it is hardly surprising that in their speech we find such sentences as the following:

(LS,5): He di'n' got no baby, that mama.
(CS,6): I don't like nothing.
(HC,7): Because nobody will not help him.
(TA,8): I never seen no blue wig.
(RP,9): You're not getting nothing.
(NS,11): Can't hear nothing.

1.4.2 Some/Any Alternation

In Standard English, to negate a sentence containing an existential quantifier (somebody, something, somewhere, sometime, etc.), one must either make the quantifier the sole negative element (nobody, nothing, nowhere, never,etc.) or replace it with the corresponding any form (anybody, anything, anywhere, ever, etc.). The children studied rarely followed this rule. Their preferred strategy was double negation. The other possibility, use of a some form in a negative sentence, occurred only once in our entire corpus:

(RG,6): Santa, he didn't bring me some toys

We also have one example of misapplication of the some-any rule:

(EC,8): Anybody doesn't know anything.

1.4.3 No/Not Substitution

Cohen (p. 204) found only one example of substitution of no for not. He attributes it to Spanish influence; although he cites Menyuk's (1969) report that native two-year-old English speakers also substitute no for not. We found a large number of such substitutions, many of which occurred in syntactic environments strongly indicative of Spanish influence. However all occurred in the speech of the youngest least proficient English speakers, a fact consonant with a developmental explanation. Some examples are:

(M,4): I no want one.

(R,4): I no can see.

(J,4): I no go.

(LM,5): Me no like.

(Researcher: Who else?
(LM,5): Me no.

(Cr,6): You no know my head where is it.

(Researcher): But it's wet.
(Cr,6): No, is no wet.

(Researcher): Got ya.
(Cr,6): No, you no catch me.

One informant produced a similar construction using not:

(TA,8): I better go to sleep or not I'm gonna get up tomorrow.

The misplaced negation in this sentence seems clearly to be due to Spanish interference.

1.5 Interrogation
1.5.1. Direct Question

English has two different forms of interrogation. One is differentiated from a declarative sentence only by question intonation. This type of question formation is the one learned first by monolingual children. It is also the one first mastered by the children we studied which is not surprising as intonational question formation is common in Spanish.

The other type of English interrogative formation involves movement of the questioned element to the front of the sentence and "tense-attraction", which moves the tense carrying auxiliary verb(if any) to second position in the sentence. If there is no auxiliary verb carrying tense, then the do support rule is invoked. This type of interrogation is normally divided into wh-questions and yes-no questions. In wh-questions there is an overt question word (who, when, what, why, etc.), while in yes-no questions there is no overt questioned element since the whole sentence is being questioned. Examples of the two formations are:

you pres-have eaten what
⟶ what you pres - have eaten [movement]
⟶ what pres - have you eaten [tense-attraction]
⟶ what have you eaten

you past-eat the cake Q.
⟶ Q you past - eat the cake [movement]
⟶ Q past you eat the cake [tense attraction]
⟶ Q past-do you eat the cake [do support]
⟶ did you eat the cake

This degree of complexity allows considerable room for errors.

1.5.1.1 Movement

In our data, all wh-question words were moved to the front of their clause as required. Since the marker of yes/no questions, Q, has no phonological representation, it is not possible to tell whether it was moved or not. The cases which might be taken as indicating lack of Q movement were interpreted instead as phonological deletion of do.

In two sentences in our corpus, the movement rule was applied inappropriately. In

(LR, 8): Everyday he gonna go?

the everyday should presumably have been stressed rather than moved while in

(DA, 5): Where do I put the glue?
Here I put the glue?

not only was here moved inappropriately but the do which should have been generated was omitted.

1.5.1.2 Tense Attraction

Several informants failed to move the tense-bearing element to the second position in the sentence, e.g.:

(CS, 7): What I*'m* gonna do?

(JS, 5): What time it *is*? What time is? What time is it?

(TA, 8): What these *are*?

(GG, 11): Who you*'re* talking to?

(TA, 8): Look it.

(GG, 11): Who are you talking to?

The utterances of JS and GG suggest that these children are aware of the rules for question formation, but that correct production may require conscious monitoring of speech.

A more frequent error was to omit the copula when it should have been moved as in:

(SS, 5): Where _ you gon' go?

(LR, 8): Everyday _ he gonna go?

(HC, 7): When _ we gonna stop?

(LP, 12): So what _ you gonna do about it?

(R, 4): _ This nickle too?

(LS, 5): What color _ he clothes?

(LS, 5): Now what color _ this?

(LM, 5): What _ this?

(PG, 5): Are these are little? _ This mine big?

Some of these sentences are of a type common in non-standard English where the *are* form of the copula is frequently reduced completely in questions. Although such reduction does not apply to the other forms of the copula (*am* and *is*), it provides examples which could easily be overgeneralized to produce the other forms.

Another sentence type heard in non-standard English omits have with got as in the following sentences produced by the children:

(R, 4): _ You got a car?

(LS, 5): How many children _ you got?

(MG, 10): Hey, _ you got water or something?

(MG, 10): How much _you got?

(LP, 12): _You got pencils?

Possibly by overgeneralization of the above rules allowing omission of helping verbs, one girl omitted the future auxiliary.

(CS, 6): _ You hel' me?

1.5.1.3 Do-support

Do is omitted in a number of wh-questions requiring do-support. Although we have not observed adult native speakers of English to omit do or did entirely, do and did are frequently reduced to near inaudibility in rapid speech and our informants may have carried the reduction rule through completely. Note that Cohen (p. 205), argues that omission of do is questions is interference on the grounds that Spanish has no do support rule. We prefer an explanation based on the English to which the children have been exposed. Examples are

(EC, 8): How d' ya take this off?
How _ ya take this off?

(RG, 7): Why _ you keep laughing?

(NS, 10): Which one _ you wan' take?

(SS, 6): Again Jim, what _ say?

(CS, 6): Where _ you put it?

(CS, 6): What _ you say?

(PA, 10): What _ I do?

(LP, 12): How much _you get Roberto?

A number of our informants produced yes-no questions with no initial do or did. This formation is common in non-standard English as well as in the speech of our informants and non-standard English is probably the proximate source in our informants' speech.

The ultimate source is more doubtful since there are two tendencies which could produce this formation _ a phonological tendency and a developmental tendency.

Phonologically we note that do and did are reduced in rapid speech at the beginning of sentences and we could claim that complete loss is the final step in such reduction.

Developmentally we note that this construction is typically the first type of question produced by monolingual learners of English as well as the first type learned by our informants. This would suggest simple retention of an early pattern.

A third possible source of this construction in our informant's speech is interference from Spanish, since intonational question formation is common in Spanish.

(SS, 6): _ You want to me to read you a story?
(SH, 5): _ You know what we call these?
(SH, 5): _ You know what copy is?
(LS, 6): _ You wanna do that again?
(LS, 6): _ You know whose garage is this?
(LS, 6): _ You know what they color are?
(HC, 7): _ You know why they're laughing for?
(MS, 6): _ you know how to make a fire truck?
(BS, 15): _ you know what it is that white stuff?

Assorted other errors whose status is uncertain also occurred, e.g.:

(GG, 11): What do you suppose to do going on in in here?
(TA, 8): Why do you wasn't scared?
(TA, 8): Then he says "Why don't you scare of me?"
(LS, 6): You know what they color are?
(DA, 6): Where do I put the glue? Here I put the glue?

1.5.2 Indirect Questions

Cohen (p. 205) observes that in Spanish the elements of the indirect question are ordered in the same way as are those of the direct question:

¿Quién era ese hombre?
Yo quisiera saber [quién era ese hombre].

While in English subject and verb are in the normal order in indirect questions

What is that?

I want to know [what that is].

Consequently when Cohen's informants produced some sentences of the form:

I want to know [what is that].

he attributed them to Spanish influence.

After we had noted this incorrect construction among our informants we became sensitized to it and we have since observed it in our own speech as well as in the speech of other native speakers of English and occasionally in print in scholarly articles and textbooks. We suggest that the fact that the embedded clause is introduced by a question word may trigger the inversion of subject and noun when the speaker is not carefully monitoring his speech be he monolingual or bilingual. Thus, the fact that in Spanish inverted word order occurs in both the direct and indirect question may be considered to be a further source of error in the bilinguals speech though not the sole source. Examples are:

(SH, 5): I know who's is that.

(CS, 6): You no know my head where is it.

(DH, 7): He wants to know how old are you.

(LS, 6): You know whose garage is this?

(LS, 6): Hey Malcolm, my baby don't know how's the way.

(L_pS, 8): Guess how old are that one.

(DH, 7): He wants to know how old are you.

(PA, 9): You know what's a chicken house?

(LS, 6): You know whose garage is this.

1.5.3 Incorrect Question Word

Cohen (p. 205) found that several of his informants used how in sentences which called for what in English but whose Spanish translations called for como 'how'. One of our informants also made this mistake, which is probably due to interference from Spanish:

(RG, 7): How did you say?

Another informant's error could either be due to interference from Spanish or due to a blend of two correct English sentences:

(DA, 6): How does it come out like?

In several other cases random-seeming errors in question words were made:

(CS,6):Como se llama ese, Chiva?

(SS, 6): Who? _ color of the candy? Blue.

(LM, 6): Sammy, what you doing to that?

(AG, 7): Whose said that?

(LP, 8): He doesn't know who to talk.

These are probably just performance errors.

1.5.4 Tag Questions

Tag questions are appended to an utterance to elicit comment on its truth value. In other European languages including Spanish this function is fulfilled by the use of fixed expressions (e.g. _¿verdad?_ in Spanish) as it may also be in English by such expressions as _right?_ Perhaps because the tag question is syntactically complex and because its meaning can be otherwise conveyed, it was not mastered by any of the children studied.[1]

In a tag question the auxiliary verb of the statement being questioned is copied, or _do_ is generated if no auxiliary exists; the subject of the statement is replaced by the appropriate pronoun; question word order is used; and the question is positive if the statement is negative and negative if the statement is positive. In our entire corpus of natural conversations there are only six examples of sentences with tag questions, only one of which was formulated correctly. They are:

(DA, 6): Miss H she drawed that wrong didn't she?
(SS, 5): You're gonna bring the grapes are you?
(AG, 8): I'm red ain't em?
(LpS, 8): You don't count this one don't you?
(MG, 10): (Let's play checkers) one more time, aren't we?
(MG, 10): You should've went; you should've think pretty good wouldn't ya?

These examples indicate that the children have difficulty both with selecting the correct auxiliary verb and with reversing the negative/affirmative polarity of the sentence questioned.[2]

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[1] Our adult native Spanish speaking research assistants also had difficulty with tag questions. Note, however that Langendoen (1970: 10-28) points out that there are cases in which even adult native speakers of English disagree on the proper tag question. For a discussion of the acquisition of tag questions by monolingual children see Brown and Hanlon, 1970.

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[2] The same types of errors occurred when children were given statements and asked to append tag questions to them. The older more fluent English speakers generally correctly reversed the sentences polarity, but had more difficulty selecting the correct auxiliary verb. Younger children tended to have equal trouble with both aspects of tag questions formation.

1.6 Phonology

In this section we will basically discuss the areas in which the children's speech is in conflict with Standard English at a phonemic level, descending to the phonetic level only occasionally. In general the children's phonetic realizations of English phonemes were within the permissable range of variability for monolingual English-speaking children of their age, that is, they had no distinctive phonetic accents (Note: in children's speech the range of permissable variability of a given phoneme is wider than in adults' speech. (Dale 1972:175).That is, we look at an allophone of a phoneme as an abstract target, tokens of the allophone in adult speech cluster more tightly around the abstract target than do such tokens in children's speech.)

1.6.1 Devoicing of final consonants

We distinguish three degrees of devoicing: normal, half-devoicing, and full devoicing. In our data half-devoicing applies only to fricatives.

In Standard English it is normal for voiced consonants at the ends of words to trail off into voicelessness (Bloomfield, 1933:99). Our informants' English shows such devoicing, but the devoicing is frequently more extensive than is the case in English, and can extend to the point where a final voiced consonant is indistinguishable from a final voiceless consonant as in NS's pronunciation of side as /sayt/, homophonous with sight. Age factors are visible in the devoicing of final d and g to t and k (which is more frequent among younger children) and in the devoicing of final z (younger informants seem to prefer the extremes -- either complete devoicing or use of the normal English pattern, while older informants seem to prefer half devoicing).

	Group				
	61-3	64-5	66	67	68-9
b	0/-/0	0/-/0	0/-/2	0/-/2	0/-/1
d	0/-/11	2/-/20	3/-/13	1/-/2	5/-/7
ǰ	0/-/0	0/-/2	0/-/7	0/-/5	0/-/0
g	0/-/5	2/-/3	1/-/4	0/-/5	10/-/6
v	0/0/1	0/0/2	0/0/1	0/1/0	1/0/5
ð	0/0/0	0/0/0	0/0/1	0/1/0	0/0/0
z	1/19/1	7/53/13	3/41/34	6/17/17	25/11/36
ž	0/2/0	1/1/10	0/0/0	0/1/0	2/0/1

Devoicing of final voiced consonants

The numbers presented are fully devoiced/half-devoiced/normal. Groups are by birth date. Note that only in the case of z and ž are the normal English variants in the minority.

1.6.2 Weakening of Intervocalic *t* and *d*

Both English and Spanish have rules weakening intervocalic *d*. English weakens *t* and *d* to a flap (*D*), while standard Spanish weakens *d* to *ð̆* and Chicano Spanish further weakens *d* to *∅* in certain environments, as in *colorado*→*colorao*(see section 2.6.5). Some younger children apply the Chicano Spanish rules to English *d* and *t*, producing *watər*, *wadər*, *wað̆ər*, *waər*. Two young informants (LS and LM)also weaken English *t*, *d* and *ð̆* to *l*, producing *walər*, *bralər* and similar forms. In many cases a *t* or *d* at the end of a word followed by a word beginning with a vowel (e.g. *get out*) is treated as if it were intervocalic, especially by the younger informants. The same extreme weakening rule can be applied in this environment, e.g.

(LS, 5) gel out [get out].

1.6.3 L and R alternation.

The same informants who weaken t/d/ð to l intervocalicly also replace English r and l at times, e.g.:

(LS, 5) loom for room.

This mirrors the l/r alternation in Spanish (see section 2.6.7), although it occurs in the speech of fewer informants and is not mentioned in the literature. It is probably developmental in English.

1.6.4 Strengthening of Initial *ð*

Initial *ð* in determiners, pronouns, and adverbs (e.g., the, them, there) is replaced by *d* frequently - more frequently by younger children and less frequently by older.

All children produced at least some examples of *ð*, and all but two of the oldest produced some examples of *d*. In the only instance in which the *d*-*ð* variation sorted by sociolinguistic environment, *d* predominated in a formal interview situation while *ð* predominated in an informal play situation. We have no explanation for this highly counter-intuitive result.

1.6.5 Simplification of Word-Final Consonant Clusters

Most of the word final consonant clusters in our data ended in t, d, s, or z. Final t and d were lost about 50% of the time. Such loss occurred even in words which the children were specifically asked to repeat. The age of the informants seems not to affect this loss nor does the t or d's morphological status (verb tense marker (as in left) contracted negative marker (-n't), or part of the word root (as in want)).

For word-final Cs and Cz, both age and morphological status had an effect on retention of s or z. Stem-final Cs and Cz were rare in our data except for cases of -ts, -dz and -fs, all of which were preserved by children of all ages (except that the t and d were lost in a few cases). Final s and z which marked the plural and possessive of nouns (cats, cat's) were uniformly preserved by the older half of our informants and were lost 50% of the time by the younger half. Final s and z marking the possessive plural of nouns (cats') were preserved in the speech of all children (except SS, who still preserved them more often than she lost them.) Final s and z which marked the contracted third singular present tense of be (cat is → cat's) were omitted only very rarely and then only in the speech of the youngest informants Final s and z which marked the third singular present tense of uncontracted verbs was never omitted by older informants. Only the youngest informant omitted them a significant number of times.

1.6.6 Reduction of Consonants

A number of consonants which are in some sense "difficult" are replaced by other consonants which are presumably "easier". It is impossible to define "difficult" and "easy" except in operational terms, e.g. č is converted to š by loss of affrication, while ž is converted to ǰ by addition of affrication.

č is converted to š in the speech of TA and EC half of the time. EC converted it to s once, as well. No other children had trouble with it.

ǰ is converted to č occasionally by four informants of widely varying ages and to š occasionally be TA and HC.

č and ǰ are both regularly converted to ts by LM, one of our youngest informants.

ž is regularly converted to ǰ by all but the oldest informants. It is regularly converted to š by LS, one of your youngest informants.

θ is frequently converted to t by the younger half of our informants, and to s by LS and HC (both of whom also convert it to t). Older informants have no difficulties with θ.

ŋ is usually correct, although at the end of a word stem it was often converted to ŋk (e.g. bang → bank) by informants of all ages. The progressive participle suffix -ing was frequently reduced to -i or -I by the younger half of our informants. Reduction to -ən was rare. All our informants produced the correct form (-Iŋ) at least half the time.

1.6.7 Suppression of Unaccented Syllables

Although our informants often suppressed unaccented syllables in Spanish, especially word initially, (see section 2.6.12) we found very few cases of such suppression in English. The instances of suppression which occurred in English were almost entirely of the morphological markers -əd (past and past participles of verbs) and -əz (plural and possessive of nouns and third person singular present tense of verbs.)

2 Spanish Deviations from Standard

2.1 NP Constituents

2.1.1 Nouns

2.1.1.1 Number Errors in Nouns

(CS,6.5) Yo miro mi hermano en *su* (sus) calzoncillos.
I look at my brother in his underwear.

(PG,5) & Mira los pieses. (pies)
(RG,7) Look at your feet!

It is virtually impossible to be sure of many of our examples due to the final *S* deletion also occurring in this dialect. The second example may be either dialectal or developmental.

2.1.1.2 Gender Errors in Nouns

We found only one case in which the gender of a noun was switched and we consider it to be a developmental error.

(DA,5) Ay chihuahua, esta (hay) *un cucaracho* (una cucaracha).

2.1.1.3 Incorrect Formation of Nouns

(MsM,40) Hubo mucha *destruidad* (destucción)
There was a lot of destruction.

This non-standard form is the result of taking the verb stem of *destruír* and adding the noun ending of *dad*. It could be either a performance error or a dialect form.

2.1.2 Pronouns

2.1.2.1 Omission

2.1.2.1.1 Omission of Direct Object Pronouns

The younger children frequently omitted direct object pronouns. In most instances such pronouns were omitted in environments in which they were redundant, that is in which they added nothing to the meaning of the sentence as in:

(M,4) No __ tengo vedes (verdes).
(LM,5) Como ésta, mi mama tiene __.
(LM,5) Este es el mió, __ que me.
Voy a llevar a la casa.
(PB,5) ¿Y ésto también __ vamos a pintar?
(CS,6) Tu __ quiers a él.

Occasionally these children also omitted a direct object whose meaning was not recoverable from the sentence context, e.g.:

(JV,5) No traje.
(PG,6) Haz do los chanquitos.

These errors appear to be developmental in nature.

2.1.2.1.2 Omission of Indirect Object Pronouns

Even the older children omitted redundant indirect pronouns. All of our instances of such omission come from sentences whose verbs refer to speaking, e.g.:

(CS,6) Di__ a Jim que __
(PA,9) Ella no preguntó a nadie.
(HS,13) Ella no preguntó a alguien.

It is possible that these omissions reflect not developmental errors but rather a dialect change in progress.

2.1.2.1.3 Omission of Reflexive Pronouns

In a few instances the younger children omitted reflexive pronouns as in:

(JV,5) Mira, yo pasé acá

(PG,5)   Yo quería cayer
(CS,6)   No, yo no caigo

These errors appear to be developmental in nature.

2.1.2.2 Incorrect Insertion of Pronouns

In a few instances the younger children incorrectly inserted reflexive pronouns and direct object pronouns. The latter may be the result of an overgeneralization of the rule requiring an indirect object pronoun in a sentence in which the indirect object is also expressed by a noun.

Examples are:

(PG,5)   ¿Lunes ya se pasó?
(DA,5)   Ira, no me voy sacar.
(JM,7)   ¿Que me voy sacar?
(LS,5)   Ay maestra, pon lo la corona aquí.
(PG,5)   David los tiene todos los flaquitos.

2.1.3 Article Omission

Article omission occurred frequently in the Spanish of the youngest children. It occurred not at all in the speech of those over six. Examples of article omission are:

(M,4)   Esa no es vaca.
(JS,4)   Mira zapato.
(JV,5)   No sé, mira cara.
(JV,5)   David mira tuyo!
(JV,5)   Ya esta muerta, mosca.
(DA,5)   Yo quiero colorear
(Teacher)   ¿Cual?
(DA,5)   Payaso.
(PG,5)   Este es marrano.
(Teacher)   ¿Que es?
(LS,5)   No, caballo.
(RG,6)   Mi hermana tiene gujero.

The majority of cases of article omission occur in two environments: (1) in predicate nominative constructions and in elliptical constructions reduced from predicate nominative constructions (both of which are generally part of long question and answer sequences in which the children respond to the identification questions of their teachers) and (2) after mira in spontaneous identifications.

2.2 Verb Phrase

2.2.1 Verbs

2.2.1.1 Verb Number Errors

Most of the deviations in verb number consist of the plural becoming singular and we believe them to be developmental errors. We found the following in our data.

(RP,10) No les gustó (gustaron) ningunas flores.
They didn't like any of the flowers.

(PG,5) Esta (Están) muy sucios.
They're very dirty.

(LM,5) Los ojos, do qué color es (son)?
What color are the eyes?

(MM,5) Entró (Entraron) seis malanitos.
Six little pigs came in.

(LS,5) ¿En dónde vive (viven) ellos?
Where do they live?

(CS,6.5) Se cayó (cayeron) los pantalones.
His pants fell down.

(HC,8) Ella no quieren (quiere).
She doesn't want to.

(T,5) ¿Quien me quitaron (quitó) mi ...?
Who took my...?

In addition, we found three other deviations, two of which we suspect are the result of interference and the other a dialect variation.

(RG,7) Es (Son) Jose, David, Lety, and Jim.
It's Jose, David, Lety, and Jim.

(PG,5) Seis *era* (eran)?
Was it six o'clock?

(MsM,40) La gente *aplaudían* (aplaudía).
The people applauded.

We believe the first two illustrations to be examples of interference because they are exact translations of the English form. In addition, the presence of the English word *and* in the first example might better the chances for us to conclude that English was interfering. We believe the third example to be dialectal because we have seen a general tendency in Spanish (especially in Mexico) for the words *mayoria* and *gente* to become plural.

2.2.1.2 Verb Person Errors

(PG,5) Yo no *puede* (puedo) hacer esto.
I can't do this.

(RG,7) Este *es* (eres) tu.
This is you.

(JM,7) Yo *jujó* (jugué) con Panchy
I played with Panchy.

(RG,7) Ella te *quiero* (quiere).
She loves you.

In most cases, the first or second person became third person. There are three possible sources for the probable interference in the second example:

1. Treating the word *this* (*Este*) as the subject of the sentence as is done in English. (Spanish would treat *tu* as the subject and conjugate the verb accordingly.)

2. Not distinguishing the polite and familiar forms of *you* when conjugating the verb (English has only one form for *you*).

3. Phonologically equating *es* with *is*.

The last example is the only case of a third person form changing to a first. With the exception of the second, we believe these examples are all developmental phenomena.

2.2.1.3 Verb Tense and Mood Errors

We encountered a good deal of difficulty when attempting to find the probable source of the deviant verb forms listed below. As the reader may notice, more than half the examples were produced by adults. This distribution does not accord with other findings. Gonzalez found "wide-spread misuse" of the subjunctive, conditional, and imperfect in his study in Corpus Christi, (Lance 1975: 42) but his informants were first grade children. Lance found that the adults in his community (Bryan) generally used the standard forms for most verbs, including subjunctive forms. We found the following deviations in the children's speech in our community:

Conditional → Past subjunctive = (MR,4) Si no fuera por José,
Si no fuera por José, estuviéramos (estaríamos) perdidos.
If it weren't for José we'd be lost.

Present subjunctive → Imperfect = (LM,5) .. y que iba (vaya) lecio.
...and it has to be dark.

Present subjunctive → Present indicative = (DA,5) Los podemos abrir
cuando lo vamos (vayamos) a pintar.
We can open them when we paint (it, them)

Preterite → Imperfect = (LM,5) Cuando era (fue) el cumpleaños de
Michele.
When it was Michele's birthday.

Imperfect → Present = (?) Yo tengo (tenía) un dime yesterday.
I had a dime yesterday.

As in Gonzalez's findings, all of the errors made by our children involved a subjunctive, conditional, or imperfect. Lance has claimed that the errors reported by Gonzalez are developmental in nature because his (Lance's) adult informants used standard forms. However, because of the surprising number of deviations produced by our adult informants, it is nearly impossible to know for sure if our children's deviations were actually developmental. The following deviations were produced by the adult informants in our community:

Simple Present → Imperfect = (MsM,40) Estoy tan dormida cuando iban (van) a ser las seis.
I'm so tired when it's around six.

Simple Present → Preterite = (MsM,40) Pues ya trabajo (trabaja).
Well now she works.

Present Subjunctive → Present Indicative = (MsG,30) El que tiene (tenga) menos.
He who (Whoever) has the fewest.

El que pone (ponga) bien su nombre.
He who (Whoever) writes his name well.

Present Indicative → Present Subjunctive = (MsG,30) No le hagas así mucho porque se te acabe (acaba).
Don't do it like that a lot because you'll use it up.

Past Subjunctive → Present Subjunctive = (MsG,30) No le pedí que lo haga (hiciera).
I didn't ask him to do it.

Preterite → Past Subjunctive = (MsM,40) Los dos estaban muy calladitos hasta que llegara (llegaste).
The two of them were real quiet until you came.

2.2.1.4 Modification of the Second Person Familiar Preterite

(CS,6.5)	tumbaste		tumbates	fell
(LS,5)	hiciste		hicites	did, made
(DA,5)	diste	→	dites	gave
(RG,7)	caíste		caítes	fell
(PG,5)	acabaste		acabates	finish
(PG,5)	pintaste		pintates	painted, colored
(JV,5)	viste		vites	saw

Although we have no examples of this in the adult speech of our community, we believe that this is nevertheless an example of dialect variation. It is probable that we do not have adult examples of this modification in the preterite because most of our data is of the children's conversations. Our decision is based on other studies of Mexican-American Spanish which have reported finding this form. Spanish dialectologists have offered three explanations for this phenomenon. One reason offered was that the final analogical S was added because all other second person familiar forms end in S, and then the medial S dropped (which is not uncommon in many dialects of Spanish). Another explanation is a possible confusion between the tu and vosotros forms as the latter ends with steis. Donald Lance (1975: 42) suggests that it may be an archaic or anological form of the Latin endings of atis. It is interesting to note that this form is found in parts of Mexico (Oajaca and Veracruz), Argentina, and in Andalucia.

2.2.1.5 Overgeneralized Verb Form

(HC,8)	miro		mirio	looked
(SS,6)	vino		vinio	came
(TA,8)	trajeron		trayeron	brought
(MsM,40)	anduvo		ando	walked
(MsM,40)	durmamos		dormamos	slept
(LR,8)	pusieron		ponieron	put
(I, 35)	puse		puni	put
(DA,5)	compuse	→	componi	put together
(R,4)	traje		trayi	brought
(LS,5)	se		sabo	know
(MM,5)	mueve		move	move
(SS,6)	juega		juga	play
(MS,10)	jugar		juegar	to play
(MsM,40)	sientata		sentate	sit down

These overgeneralizations make perfect sense if one is familiar with the Spanish language. They, for the most part, represent regular endings on irregular verbs. These forms are typical of the speech of Spanish-speaking children who are at the initial stages of language acquisition and are also quite common among adult learners of Spanish as a second language. Donald Lance (1975) found many overgeneralized verb forms in the Mexican-American Spanish of Texas. These forms are also heard among rural people throughout the Spanish-speaking world. We feel that the examples found in our community are generally developmental in origin and that the three examples found in adult speech in addition to juegar, are dialectal. Aurelio Espinosa found an "elimination of the O-UE alternation in all first conjugation verbs with the result that ue appears in all forms regardless of stress" (Saltarelli 1976: 366) in his 1930 study of New Mexican Spanish. Espinosa's observations account for the presence of juegar in our data, as most of the features found in other Mexican-American communities were also found in ours. The three adult examples seem to be common among uneducated Spanish speakers and are therefore part of a dialect.

2.2.1.6 Verb Choice

The deviations in verb choice which we found in our community are probably a mixture of dialect forms, developmental errors, and interference errors. Lance (1975: 48) found that tener and traer are used interchangeably in his Texas community and we found this to be so in ours. The confusion among ser, estar, and haber may have several sources:

1. They may be the result of interference from English as English uses one verb for the three.
2. They may be dialectal with haber/ser → estar;
   a. There are more instances of haber and ser → estar than there are of any of them becoming either ser or haber.
   b. There are adult examples of ser and haber → estar.
   c. Manuel Alvar Lopez found ser and estar, and haber and ser (but not estar) to be used interchangeably in Aragon (Spain).

3. They may all be developmental (with the exception of tener → traer) with the adult examples being merely performance errors.

The following exemplify the type of interchanges found in our data:

tener → traer	(T,5)	DIALECTAL
ver → mirar	(LM,5 and MsG,30)	DEVELOPMENTAL, PERFORMANCE
ser → estar	(MsG,30)	INTERFERENCE
estar → ser	(JV,5)	INTERFERENCE
haber → estar	(LM,5)	INTERFERENCE
ser → ir	(MM,5)	DEVELOPMENTAL

2.2.1.7 Verb Omissions

In all of our examples, the verb omitted was to be. We have no real reason to believe that these omissions are anything but developmental in nature. It is typical for young children to omit redundant forms, and in all of our examples, the message was clear, despite the verb omission. Our one adult example is most likely a performance error.

(M,4)	Teresa ___ mi mama. (es)	Teresa is my mother.
(M,4)	Yo ___ la muchacha. (soy)	I'm the little girl.
(JV,5)	Ese ___ mio. (es)	That's mine.
(DA,5)	Así ___ como anda. (es)	That's how he walks.
(LM,5)	De que color ___ la cara? (es)	What color is the face?
(T,5)	___ chiquito. (esta)	It's little.
(MsM,40)	___ una grabadora. (es)	It's a taperecorder.

2.3 Prepositions

2.3.1 A Insertion and Deletion

In Spanish, an a is obligatorily inserted in the following instances (among others):

1. Before cual when cual is followed by a form of ir (to go) or quedar (to stay). (i.e., A cual vamos?)
2. Before donde when donde is followed by a verb of motion. (i.e., A donde vas?)
3. Before a direct object if it refers to a person. (i.e., Viste a tu mama?)
4. Before an infinitive that is preceded by a form of ir (to go). (i.e., Vamos a pintar.)

Many of the children and occasionally even some adults of our community inappropriately inserted or deleted an a. These errors are the results of incomplete mastery of the above rules. Our informants seemed to be aware that these rules existed but were uncertain of the environmental specifications. We believe that these deviations are developmental in nature with the adult examples being performance errors.

(LS,5) A cuál es amarillo?
Which one is yellow?

(MM,5) A dónde viven ellos?
Where do they live?

(?) Comiste a mi cake.
You ate my cake.

(JM,7) A nosotros solitos estabamos?
Were we alone?

(MsG,30) Pudieron a pintar eso
They could color that.

INSERTION

(MsM,40) ___ dónde fuistes?
Where did you go?

(CS,6) ___ dónde va este tonto
Where's this jerk going?

(?) María dijo que no mirió ___ nadie.
Maria said she didn't look at anyone.

(DA,5) Ya vamos ___ lavarnos las manos.
Now we're going to wash our hands.

DELETION

2.3.2 Deletion of De

De omission did not occur a great deal in our data. It occurred almost entirely before colors and within idiomatic expressions.

(MsG,30) José ya lo estas haciendo ___ adrede.
Jose, now you're doing it on purpose.

(PG,5) Yo tengo miedo ___ pasarme por las orillitas.
I'm afraid to go over the lines.

(JM,7) Pintó todo ___ azul.
She colored everything blue.

The first example seems likely to be a dialectal variation as we have noticed this form among other Mexican-Americans. Although the second example appears to be the result of interference from English we do not believe that the particular child producing this utterance knew enough English to have had it interfere with her Spanish. Consequently, we believe it to be a developmental error. The third example may be an interference error.

2.3.3 Deletion of En

Like de deletion, there were few cases of en deletion. The most common environments in which en was omitted were:

1. en + donde
2. en + que
3. en + NP

We found the following:

(MsG,30)	Hay veces ___ que no quiere ir. Sometimes he doesn't want to go.
(?)	Yo miro a mi papá ___ los calzoncillos. I look at my father in his underwear.
(DA,5)	___ donde?

2.3.4 En and A Alternation

(MsM,40)	Fué en (a) casa de Lupe. She went to Lupe's house.
(LM,5)	En (a) veces no, en (a) veces si. Sometimes no and sometimes yes.
(MsM,40)	Estaba a (en) la casa. She was at home.
(?)	A (En) la noche. At night.

We had considerable difficulty classifying these deviations according to their source. While the third example clearly appears to be the result of English interference, that particular informant knew virtually no English. The second example, though produced by a child, is presumably dialectal as en veces has been cited throughout the literature as being a Mexican-American Spanish dialect form. The fourth may be the result of interference. The fifth is most likely developmental in nature and the result of incomplete mastery of the A-insertion rules (See comments on a deletion and insertion, section 2.3.1). The sixth example probably results from incomplete knowledge of an idiom and is most likely developmental. The first must be a performance error.

2.4 Negation

No negation errors were found in the children's conversational Spanish. However, when the children were given affirmative sentences in Spanish and asked to negate them, they all had difficulties with sentences whose English translations involved expressions containing some. In Spanish these sentences may be negated either by negating the verb and following it by the negated some expression as in:

No comió nadie

or by negating the some expression and preposing it to the verb leaving the verb affirmative as in:

Nadie comió.

In the majority of test sentences the children followed neither strategy. Instead they negated the verb leaving the some expression unchanged as in:

(LS,5) Ella no preguntó a alguien.
(LS,5) Siempre no quiero juegar con todos.
(LS,5) Yo no me gusta alhunas floles. (algunas flores).
(MS,7) No le gusto unas frores.
(HC, 7) Juan no queriba hablar con alguien.
(AR,8) No le gustó algunas flores.
(AR,8) Yo no ví a alguien.
(TA,8) Yo no ví a alguien.
(TA,8) No pasó algo.
(PA,9) No pasó algo.
(MS,9) Ella no preguntó a alguien.
(RP,9) Yo no ví de alguien

(RP,9) No les gustó unas flores.

(HS,13) Arguien no comió el mole.

These examples are particularly interesting in light of the fact that multiple negation was the norm in the natural conversational English of these children. This fact together with the total absence of any negation errors in the children's conversational Spanish leads us to believe that the negation errors in the sentences exemplified above were artifacts of the testing situation rather than true reflections of the children's grammar of negation. It appears that in the test situation the children simply utilized a strategy of inserting no in the sentence given to them rather than actually processing the sentences through their rules for negative formation. Such a strategy may have been followed because a test situation, no matter how innocuously presented, was highly stressful, and thus the children sought an easy way to cope with what was demanded of them.

2.5 Adjectives and Adverbs

2.5.1 Adjective Gender

We found more instances of gender deviations in adjectives than in any other part of speech. Although our community is weakly monitored (weakly monitored communities typically undergo regularizations, simplifications, levelling, and other linguistic changes at a pace faster than changes occurring in communities with strong language monitoring), and there are instances of gender deviations in some of our adults' speech, we nevertheless feel that adjective gender deviation is a developmental phenomenon in the children's speech. We in no way preclude the possibility that there is also an abandonment of gender agreement occurring in the community, but we simply do not have enough data to make such a broad claim.

(MsM,40)	Tan bonito (bonita) esa alberca. That pool is so pretty.
(MsG,30)	La zanahoria es blanco (blanca). The carrot is white.
(LM,5)	La zanahoria esta duro (dura). The carrot is hard.
(LM,5)	No esta dura, esta blandito (blandita) It's not hard, it's soft.

2.5.2 Adjective Number

(MsG,30)	Eran igual? (iguales) Were they the same?
(JV,5)	...ojos verde. (verdes) ...green eyes.

These were the only examples of deviation in adjective number found in our community. The first is probably the result of interference from English and the second may very well result from a final s deletion be an adjective error at all.

2.5.3 Overgeneralization of Adjectives

(DA,5)	roto ⟶ rompido	broken

Like the verb overgeneralizations we found, this sole example of adjective overgeneralization was formed by adding the regular adjective ending for er-ending verbs, ido, to the verb stem. The only problem is that in this case, the adjective should be irregular. This overgeneralization is a developmental error.

2.5.4 Adverb Choice and Adjectivalization

We found two basic phenomena involving adverbs in the community studied: adverbs becoming adjectives and the substitution of one adverb for another. Of the thirteen adverbial deviations we found in our data, seven involved bien → bueno. Although our corpus includes no instances in which an adult produced bueno instead of bien, we nevertheless feel that there is enough evidence of adverbs becoming adjectives throughout the Spanish-speaking world to regard this a possible dialect feature. It is also quite common for adverbs to become adjectives in English, especially in the case of well → good.

Of the other six deviations in our data, four involve using the wrong adverb and two are cases in which two adverbs were used when only one was necessary. We believe that these are developmental and that the adult's example is a performance error.

(DA,5)	Ahora vamos a hacer más, esta bueno? (bien)
(PG,5)	Norma también (tampoco) esta aquí.
(PG,5)	Ahora (Hoy) es viernes.
(MsM,40)	No han venido ya (todavía).

2.6 Phonology

This section discusses those deviations which we consider significant based on frequency of occurrence, A particular example is considered significant if it has one or both of the following qualifications:

1. If the precise deviation occurred three or more times. (i.e., hijita occurring five times as jita)

2. If the type of deviation occurred three times or more. (If esperate occurs only once as perate, but there are multiple occurrences of suppressing initial and unaccented syllables in other words.

Before beginning, we wish to define certain terms.

1. Overgeneralization: Over-extending a rule. Putting a regular ending on an irregular verb. (i.e., Yesterday we goed.)

2. Analogy: The tendency or process of modifying or creating words on existing patterns. (i.e., /mover/ moviendo → movando)

3. Interference: Influence from one or more languages on another. (She is a girl smart)

4. Developmental Error: Errors which are temporary and typically made by young children during the initial stages of language acquitision.

2.6.1 F Aspiration

Although we did not find any adult examples of F aspiration, we are certain from consulting other works that it is a dialect variation. Anita Post has found it in the Mexican-American Spanish of Arizona (1975: 32) and Lance saw evidence of it in the Spanish of Texas (1975: 40). Saltarelli found it to be widely used among Mexican-Americans in another town in Illinois and provides an interesting historical explanation for the phenomenon. According to him, due to the weak monitoring of Spanish in Mexican-American communities, there is a tendency towards generalization or simplification of rules. Between the fourteenth and sixteenth centuries, there was a rule in Old Spanish in which F → H before vowels. According to Saltarelli's theory, this rule is being extended in Modern Spanish so that F → H before vowels and glides. His proof that this is actually a generalization of the same rule is that aspiration before vowels occurs synchronically as in jumar (fumar), jalda (falda), and projundo (profundo) (1976: 363).

F is often aspirated in parts of Puerto Rico, Colombia, Spain, New Mexico, and in the Yucatan. In most cases aspiration of F occurs after ue or ui (glides), and in some cases, as has been found in Colombia, the right environment may even be created in order to aspirate the F (Felipe → Juelipe). Our last example (falta → jalta) is the only F aspiration before a vowel and not a glide in our community. It is difficult to tell whether this is simply evidence of the continuance of the Old Spanish rule, as Salterelli suggests, or whether it is actually a generalization of the modern rule--the reverse of what Saltarelli proposed. It is also possible that the two rules are totally unrelated.

(PG,5)	afuera	→	ajuera	outside
(MM,5)	fuí	→	juí	I went
(TA,8)	fuera	→	juera	be- past subjunc.

2.6.2 Intervocalic S Aspiration

(MM,5)	nosotros	→	nojotros	we
(T,5)	hacer	→	hajer	to do, make
(MM,40)	casa	→	caja	house

Aspirating intervocalic S's is quite common in several dialects of Spanish. Because of its occurrence among the adults of our community and because of its wide use among Mexican-Americans of other communities and among speakers of other dialects of Spanish, there is no reason to believe that this is anything but a dialect variation. This feature has been noted in parts of Puerto Rico (where nosotros → nojotros), in Colombia (where necesito → nejesito and una señora → una jeñora) and in Chile (where casa → caja, mesa → meja, and cosa → coja). (Friedenberg-Figueroa, personal observations). It is interesting that this does not occur in all intervocalic situations in our community, nor in the others, and it most commonly occurs in the word nosotros in all of the aforementioned communities and countries.

2.6.3 S Aspiration and Deletion in Final Position

Although we found a good deal of final s deletion and aspiration in our community, it did not occur consistently. Like intervocalic d deletion, final s aspiration or deletion occurs widely throughout the Spanish-speaking world. Saltarelli notes it in his Illinois community, (1976:363) and Morracco has found it in Corpus Christi, Cuba, Santo Domingo, and Puerto Rico. (1974: 91). Lapesa observes that the s-plural and the second person singular s have varying realizations in different Spanish-speaking communities. They are:

1. /0/ (deletion) with concomitant lowering and lengthening of the preceding vowel in Andalucia, Murcia, and Puerto Rico.
2. /h/ (aspiration) in Extremadura, La Mancha, Andalucia, Murcia, New Mexico, Colombia, and among the less educated of South America.
3. /s/ in most of Peru and Bolivia, the plains of Mexico and some Andean regions of Ecuador and Colombia. (Lance 1975: 39).

Although many Spanish dialectologists find it attractive to trace this feature from the Americas to Southern Spain, Lapesa emphasizes that the processes occurred separately in each place.

In most dialect regions final s deletion or aspiration usually occurs consistently or not at all. However, Lance's study in Texas and ours in Illinois find it occurring only sporadically.

(MsG,30)	querías →	quería	you wanted
(MM,5)	contarlos →	contarlo	to count them

(RG,7)	tus ojos →	tu ojos	your eyes
(MM,5)	los →	lo	the
(CS,6)	unas →	una	some

2.6.4 G and B Alternation

G and B alternation is also part of the local dialect. Although we do not have adult examples of this form from our community, B → G/ __UE is a common phenomenon among Mexican-Americans in Texas and among rural Spanish speakers from just about any part of Latin America. Morracco (1974) found instances in which B → G/ __O (where volando → golando and Bobby → Gobby), although we did not.

We only found two cases of G → B, and both were in the word agujo or agujero. Although we have been told that G → B is a typical developmental problem in Spanish,[1] Morracco found it to be common in the Spanish of Corpus Christi (where juegan → jueban, aguja → abuja, and gusto → busto). Alternations between G and B, according to Morracco, are common in the Spanish of New Mexico, Arizona, Corpus Christi, Mexico, and the Caribbean. (1974: 89-92).

(T,5)	agujero →	abujero	dimple, small hole
(R,4)	agujerito →	abujerito	small dimple, hole

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[1] We consulted three native Spanish-speaking informants regularly concerning those features which we believed to be developmental. They are:
Mr. Juan Moran (Mexico)
Ms. Lucy Jaramillo (U.S. Southwest)
Mr. Jose Figueroa (Colombia)

(O,4)	abuelo	→	aguelo	grandfather
(?)	bueno	→	gueno	good

2.6.5 Intervocalic D Deletion

Intervocalic D deletion is a common occurrence throughout the Spanish-speaking world. We have found that it occurs more than it does not. In our community we found alternations such as:

(?)	mandado	→	mandao	sent
(R,4)	encuerado	→	encuerao	naked
(JV,5)	arrugados	→	arrugao	wrinkled

D deletion usually occurs between A and O, especially in past participle forms of AR-ending verbs. In Madrid, South America, and in the Caribbean it is quite usual to hear pescao, abogao, and helao for pescado, abogado, and helado (Friendenberg-Figueroa personal observation). This feature seems to be a common and fully acceptable variation.

Saltarelli found Lareo for Laredo in his community, so perhaps the environment is becomming more inclusive.

2.6.6 Intervocalic Y Insertion

(PG,5)	leer	→	leyer	read
(PG,5)	feo	→	feyo	ugly
(PG,5)	caer	→	cayer	fall

(Mrs G,30)	oí	→ oyi	I heard
(CS,6)	mocochia	→ mocochiya	snot

We found this feature throughout scattered parts of South America and the Caribbean, in addition to its occurrence in Illinois. It is difficult to cite the exact source. While in some parts of the Spanish-speaking world it is clearly a dialectal feature, we found only one occurrence of Y insertion by an adult in our community, and there is no literature reporting this feature's existence among Mexican-Americans of other communities. In addition, our informants tell us that it is a common developmental feature among child first language learners of Spanish. This may be due to the ease in pronunciation adding a y provides or due to analogy with the third person preterite forms which all add an intervocalic y.

infinitive	third person preterite	
leer	leyó	leyeron
caer	cayó	cayeron
oír	oyó	oyeron

2.6.7 L and R Alternation

In Puerto Rico r → l at the ends of syllables, Tarde, comer, and puerta are regularly pronounced talde, comel and puelta by members of all classes of the society. Although the rule is consistent, and one rarely hears an r pronounced as /r/ in word final position or preceding a consonant, the environment does not seem to be changing or becoming larger. The substitution of l for r in syllable final position also occurs, though not invariantly, in Andalucia, the Dominican Republic and along the Atlantic coast of South America. (Friendenberg-Figueroa personal observation). Morracco cites a few cases of r → l in Corpus Christi in word final position, between a vowel and consonant, and between a consonant and a vowel.

Our findings differ from those in the literature in that l and r alternation in our community occurred in almost any environment. Although Morracco's study shows r and l alternation to occur in the speech of adults, we mainly found it in young children's speech and feel it is developmental.

(R → L in word initial position)

(LM,5)	recio		lecio	strong
(LS,5)	rojo	→	lojo	red
(CS,5)	risa		lisa	laughter

(R → L in intervocalic position)

(LM,5)	quiere		quiele	wants, loves
(LM,5)	mira		mila	look
(?)	cero		celo	zero
(LM,5)	ahora		ahola	now
(LM,5)	cara	→	cala	face
(LM,5)	afuera		afuela	outside
(RG,7)	eres		eles	you are
(RG,7)	caramelo		calamelo	candy
(RG,7)	dinero		dinelo	money
(LS,5)	flores		floles	flowers
(RG,7)	tiro		tilo	threw

(R → L between a vowel and a consonant)

(LS,5)	verde		velde	green
(PG,5)	verdad	→	veldad	true, truth
(LS,5)	parque		palque	park
(LM,5)	largo		lalgo	long

(R → L between a consonant and a vowel)

(MS,6)	comprar		complal	buy
(MM,5)	grande	→	glande	large
(MM,5)	quebrando		queblando	breaking
(RG,7)	Christy		Chlisty	Christy
(LS,5)	siempre		siemple	always

(R → L in word and morpheme final position)

(RG,7)	pintar		pintal	paint
(LS,5)	ver		vel	see
(LM,5)	ayer		ayel	yesterday
(MM,40)	caer		cael	fall
(LS,5)	dormir		dolmil	sleep
(RG,7)	comer	→	comel	eat
(CS,6)	levantar		levantal	get up
(RG,7)	señor		señol	mister
(RG,7)	llevar		lleval	carry
(RG,7)	por		pol	by, for
(MM,5)	acostar		acostal	lie down, go to bed
(TA,8)	entender		entendel	understand
(SS,6)	flor		flol	flower

(CS,6)	darme	→	dalme	give me
(CS,6)	hacer		hacel	do, make

(RR → L in intervocalic position)

(CS,6)	agarres	→	agales	grab
(LM,5)	borrador		bolador	eraser
(MM,5)	marranitos		malanitos	little pigs
(CS,6)	perro		pelo	dog
(CS,6)	marron		malon	brown
(CS,6)	tierra		tiela	ground, land, earth
(LM,5)	hierro		hielo	iron

(L → R)

(JV,5)	lengua	→	ruenga	tongue
(MS,10)	flores		frores	flowers
(HS,13)	alguien		arguien	someone

2.6.8 *N Insertion*

(MM,40)	déjela	→	déjenlan	leave it
(JM,7)	nadie		nadien	no one
(MM,40)	siéntense		siéntensen	sit down

N insertion has been common among Mexican-American speakers of Spanish. Lance found the following forms in the Spanish of Texas: *asina*, *ansi* for *asi*; *muncho* for *mucho*; and *nadien* for *nadie*. According to Lance, *nadien* has occurred in Mexico, Colombia and Spain, and it may be an archaic form or the result of analogy with the word *alguien*. *Ansina* and *asina* are archaic forms of *asi*. (Lance 1975: 48)

Saltarelli found *asina*, *ansi*, *ansina* (*asi*), *nadien* (*nadie*), and *acuerdamen* (*acordarme*) occurring in the Spanish of a community of Mexican-Americans in another small town in Illinois. Although he found no more examples of this in his data, he does cite *dosn* (*dos*) and *puesn* (*pues*) as typical occurrences in Jalisco and Guanajuato, from which the family he studied came (1976: 364).

Because our data showed that adults in our community commonly had this feature and because of all the supporting literature, we are certain that this is a dialectal feature.

2.6.9 R Deletion

(Intervocalic)

(MM,5)	mira	→	mia	look

(Between a consonant and a vowel)

(JV,5)	mugroso		mugoso	muddy
(JV,5)	trae		tae	bring, have
(MM,5)	nosotros	→	nosotos	we
(LS,5)	otra		ota	another
(MM,5)	tres		tes	three

(Between a vowel and a consonant)

(PG,5)	porque		poque	why, because
(MM,5)	verdes	→	vedes	green
(CS,6)	largo		lago	long

Although Morracco (1974: 89) found intervocalic *r* deletion to be a dialectal feature of Corpus Christi, New Mexico, and Arizona Spanish, our data included only one such occurrence and that in the speech of a five year old child. Therefore, it is probable that this deletion was a developmental error.

The developmental status of r deletion in the other two environments is even more assured as not only does it occur in the speech of children (or in the speech of adults imitating children), but it has nowhere been reported as a dialect feature.

(At the end of a verb stem and before a direct object pronoun)

(CS,6)	verlo	→	velo	to see it
(?)	pintarlo		pintalo	to paint it
(DA,5)	borrarolo		borralo	to erase it
(?)	llevarlo		llevalo	to carry it
(MM,5)	contarlos		contalos	to count them
(JV,5)	verla		vela	to see it

It is difficult to decide whether this illustrates r deletion before consonants or l and r alternation, with r → l. In any event, we feel certain that its sources is developmental no matter which category it is described under.

2.6.10 R and D Alternation

The source of this feature may be either developmental or dialectal. As the reader may see, all of our examples are among five-year-olds. In addition, our informants tell us that it is also a typical developmental feature. Despite the evidence suggesting this is developmental, Morracco (1974: 90-91) has found r and d alternation to be quite common among Mexican-American adults of Corpus Christi, in addition to adults of Cuba, Santo Domingo, and Puerto Rico. Nevertheless, we have assigned r and d alternation to the developmental category, simply because all our examples of this come from only the youngest children.

As a final remark, just to add to the confusion, there is also the small possibility that r → d is the result of English interference as both the Spanish r and English d have tip-alveolar environments.

(MM,5)	dijeron		dijedon	they said
(MM,5)	oyeron		oyedon	they heard
(LS,5)	mira		mida	look
(MM,5)	quiero	→	quiedo	I want, love
(MM,5)	naríz		nadíz	nose
(LS,5)	negro		negdo	black
(JV,5)	todos		toros	all, everything
(T,5)	oídos		oríos	ears

2.6.11 Metathesis

It was again difficult to pinpoint the exact source of this feature. Saltarelli found several metathesized forms in his Illinois community, where nadie → naide (or nadien) and miedó → meido. In addition to these, he found ciudad → suidad in Central Mexico, from which the oldest generation of his informants came. (1976: 364) According to Boyd-Bowman, the metathesized form of nadie is widespread in New Mexico, Mexico, Argentina, Chile, and in parts of Spain. (Saltarelli 1976: 364) Dr. Ruben del Rosario (1970: 84) notes a widespread use of metathesis throughout the Spanish-speaking Antilles, where Gabriel → Grabiel, estómago → estógamo, and nadie → naide. He emphasizes however, that it mainly occurs, "entre personas analfabetas or cuasianalfabetas de los pueblos y los campos." Del Rosario also reports the following occurring in New Mexico: pared → pader and derramar → redamar. Lance (1975: 40) found two metathesized forms in his community in Texas where an eight-year-old and an eleven-year-old said hevrido (for hervido) and quería (for creía), respectively. He considers the metathesized forms he found to be developmental phenomena.

As we have seen in the literature, metathesis has been described as both a developmental and dialectal phenomenon. In our community we found the following metathesized forms:

(LS,5)	lengua	→	luenga	tongue
(RG,7)	sirvo	→	sivlo	I serve, suffice
(JM,7)	quiero	→	quelio	I want, love
(Ms.G,30)	agria	→	aigra	bitter
(LM,5)	pantalón	→	tapalón	pants
(T,5)	oídos	→	oríos	ears

With the exception of one instance, aigra, which occurred in the speech of an adult, all metathesized forms occurred in the speech of young children. Consequently, we feel that in our data metathesis is primarily developmental in nature. However, we do not preclude the possibility of the existence of a few forms, such as aigra or naide, whose provenance is dialectal.

2.6.12 Suppression of Unaccented Syllables- Especially in Word Initial Position

(MG,30)	hijita	→	jita	daughter
(MM,5)	abuelita	→	buelita	grandmother

(CS,6)	encuerado	cuerado	naked
(RG,7)	agujero	gujero	dimple
(O,4)	tocayo	cayo	namesake
(MM,5)	elefantes	fantes	elephants
(JV,5)	llevarlo	valo	carry it
(JV,5)	hacer	cer	to make
(JV,5)	arrugados	rugaos	wrinkled
(DA,5)	agarre	garre	grab
(LR,8)	reganar	ganar	to scold
(PG,5)	acabamos	cabamos	finish
(DA,5)	descomponer	scomponer	to take apart
(CS,6)	hiciste	cites	did
(MM,40)	espérate	pérate	wait
(MM,40)	acuéstalo	cuéstalo	put him to bed
(LS,5)	resollar	sollar	to breathe
(TA,8)	hubiera	biera	have-pret. subj.
(PG,5)	atravesó	travesó	cross
(JV,5)	trabajando	bajano	working
(JV,5)	está	ta	is
(PG,5)	ahora	hora	now
(MG,30)	ahorita	horita	right now
(MM,5)	amarillo	marillo	yellow
(LR,8)	verdad	da, dad	true, truth
(M,4)	aquí	quí	here
(DA,5)	porque	que	why, because
(R,4)	almoada	moada	pillow
(MM,5)	naríz	díz	nose

(PG,5)	donde	on	where
(LS,5)	voy	vo	I'm going
(LM,5)	mira	mi	look

Because Donald Lance (1975: 39) found suppression of unaccented syllables to be common in the Mexican-American Spanish of Texas, one might think that these are simple examples of a dialect or variation of Spanish. However, it is not so simple. We have found that this feature occurs in adult speech in only a few special words: ahora (→ hora), ahorita (→ horita), donde (→ on, onde), some imperatives such as acuéstalo (→ cuéstalo) and espérate (→ pérate), and in agujero (→ gujero). No other words showed up in the adult speech of our community, nor were any noted by Lance or other researchers of Mexican-American Spanish. Hence, we have concluded that the above syllable deletions are examples of developmental errors. The work of Slobin and other primary language acquisition researchers provides further justification to this conclusion, as they have found that children typically pay more attention to the final portions of words and often leave off the initial parts.

The modification of donde to on or onde seems to be a form typically found throughout the U.S. Southwest. According to Anita Post (1975), onde is an Old Spanish form of donde and it is not the only case of archaic Spanish to be found in the speech of Mexican-Americans.

Chapter III

AN EVALUATION OF THE SPANISH AND ENGLISH DEVIATIONS FROM STANDARD LANGUAGE NORMS

In chapter two we discussed in detail first the types and sources of deviation from standard English and second the types and sources of deviation from standard Spanish found in the natural conversations of the children studied. Here we would like to summarize the deviations in the following tables, discuss them briefly, and examine the implications for the classroom teacher to be drawn from them.

Table I[1]

English Deviations Which are Dialectal

	I	II	III	IV
got	0/0	5/3	10/4	8/5
don't as 3rd sg	0/0	1/1	1/1	3/3
ain't	0/0	1/1	4/2	3/2
never	0/0	0/0	1/1	2/2
ly omiss	0/0	2/1	1/1	0/0
done for did	0/0	1/1	3/2	1/1
good for well	0/0	0/0	5/2	2/2
them for those	0/0	0/0	2/1	1/1
miscellaneous	0/0	2/2	0/0	3/3
(Dialect and/or interference)				
double negation	1/1	3/2	8/5	4/3

---

[1] The Roman numeral in the top row of all of the tables designate groupings of children according to their abilities in Spanish and English. Children were assigned to one of four ability groups for English and one of five for Spanish, I, being the lowest. These assignments were subjective, based upon a consensus of opinion of the research staff. Each child's assignment is indicated in the appendix.

Table II

Spanish Deviations Which Are Dialectal

	I	II	III	IV	V
Fam. Secnd person sg. preterit -Vtes	0/0	0/0	7/4	0/0	0/0
Deviations in the conjugation of *jugar*	0/0	0/0	1/1	1/1	1/1
bueno for *bien*	0/0	1/1	5/2	0/0	0/0
en veces	0/0	0/0	1/1	0/0	1/1
lo for *le*	0/0	0/0	0/0	1/1	0/0

Table III

English Deviations Which Are The Result of Interference

	I	II	III	IV
subject omission	4/3	16/4	3/3	7/5
preposition choice	0/0	6/4	4/4	7/4
lexical choice	0/0	3/1	4/3	4/4
object omiss with _like_	1/1	3/1	0/0	0/0
_to_ omission after _want_ and before an infinitive	0/0	2/2	2/2	0/0
possessive pronoun omission with _name_	0/0	0/0	0/0	3/1
there was instead of _there were_	0/0	1/0	0/0	0/0
noun adjective word order	1/1	1/1	0/0	0/0
other word order deviations	1/1	1/1	0/0	5/4
pronoun choice	0/0	2/2	1/1	0/0
determiner insertion	0/0	0/0	0/0	1/1
locative omission with _put_	1/1	2/1	2/2	1/1
	8	37	16	28
	45	50.6%	44	49.4%

Table IV

Spanish Deviations Which Are The Result of Interference

preposition omission	0/0	0/0	8/4	0/0	0/0
preposition choice	0/0	0/0	1/1	0/0	0/0
estar for _hay_	0/0	0/0	5/3	0/0	0/0
verb person/number errors	0/0	0/0	5/3	1/1	0/0
pronoun choice	0/0	0/0	3/1	0/0	0/0
article omission	0/0	0/0	3/2	0/0	0/0
miscellaneous	0/0	0/0	6/4	0/0	0/0

Table V

English Deviations Which Are Developmental

	I	II	III	IV
past tense morpheme omission				
regular	1/1	7/4	5/3	6/1
irregular	7/2	14/4	10/4	6/3
	8	21	15	12
past tense morpheme				
double marking	0/0	0/0	1/1	2/1
regularization	0/0	1/1	1/1	4/1
	0	1	2	6
past participle marker omission				
regular	0/0	1/1	6/4	1/1
irregular	0/0	0/0	0/0	0/0
	0	1	6	1
progressive				
be omission	2/1	9/4	1/1	1/1
-ing omission	0/0	2/2	0/0	0/0
be +ing omission	2/1	0/0	0/0	0/0
be tense	0/0	1/1	1/1	0/0
misuse	0/0	1/1	1/1	0/0
	4	13	3	1
future morph omission	0/0	3/1	3/3	1/1
copula omission	13/3	3/2	0/0	0/0
incorrect V person #				
sg for pl	0/0	13/4	3/2	1/1
pl fu sg	0/0	1/1	1/1	1/1
	0	14	4	2
tense errors	1/1	1/1	5/3	3/3
gots	0/0	3/2	2/2	2/2
question errors				
N-V order	1/1	1/1	1/1	2/2
dble marked past	0/0	1/1	2/2	0/0

Table V (cont.)

	I	II	III	IV
question errors (continued)				
incorrect modal	0/0	0/0	1/1	0/0
dble modal	1/1	1/1	0/0	1/1
modal omiss	3/2	6/2	1/1	1/1
incorrect adv placement	0/0	0/0	1/1	0/0
	5	9	6	4
Incorrect question words	1/1	3/2	1/1	1/1
NV inversions in embedded S's introduced with a question word	0/0	3/2	2/2	2/2
Pronoun errors	1/1	8/3	1/1	2/1
preposition errors				
omissions	5/1	1/1	2/2	1/1
insertions	0/0	0/0	2/2	
incorrect	0/0	2/2	1/1	3/1
	5	3	5	4
particle omiss	0/0	0/0	0/0	2/2
article omiss				
a	4/3	3/2	2/2	1/1
the	0/0	1/1	1/1	1/1
	4	4	3	2
object omiss				
indirect	1/1	0/0	1/1	1/1
direct	6/2	1/1	0/0	1/1
	7	1	1	2
possessive errors	2/2	0/0	1/1	0/0
conjunction errors	0/0	0/0	0/0	3/2
number concord	0/0	2/2	0/0	3/2
tag questions	0/0	1/1	1/1	1/1
many/much errors	0/0	1/1	1/1	1/1
telegraphic S's	14/2	0/0	0/0	0/0

Table V (cont.)

	I	II	III	IV
miscellaneous	0/0	7/3	7/4	6/4
	65	102	69	61
Developmental and/or interference				
part neg	13/7	0/0	0/0	0/0

Table VI

Spanish Deviations Which Are Developmental

	I	II	III	IV	V
verb class	0/0	0/0	6/4	4/3	0/0
verb stem	0/0	0/0	18/7	2/2	0/0
past subjunctive formation	0/0	0/0	0/0	2/1	0/0
copula deletion	0/0	0/0	2/2	0/0	0/0
verb person/number	0/0	0/0	12/5	3/3	0/0
verb tense/mood	0/0	0/0	6/3	3/3	0/0
preposition choice	0/0	0/0	10/3	0/0	1/1
preposition omission	0/0	0/0	8/4	4/3	0/0
preposition insertion	0/0	0/0	9/5	0/0	0/0
article number	0/0	0/0	2/2	0/0	0/0
article omission	0/0	0/0	14/7	0/0	0/0
pronoun insertion	0/0	0/0	7/6	0/0	0/0
pronoun omission	0/0	0/0	15/7	1/1	2/2
gender					
noun	0/0	0/0	1/1	0/0	0/0
pronoun	0/0	0/0	4/3	0/0	0/0
article	0/0	0/0	10/6	2/1	0/0
adjective	0/0	0/0	4/3	0/0	0/0
word order	0/0	0/0	3/3	0/0	0/0
lexical	0/0	1/1	16/4	0/0	0/0

Let us first note that the total number of non phonological deviations[1] in both languages was quite small. In the fifty-five hours of natural conversation[2] which were analyzed for Spanish deviations only 223 occurred, while in the ninty hours analyzed for English deviations just 472 occurred. The conversations were entirely unconstrained and alternated between Spanish and English. Spanish and English were used approximately equally. However, the older children used much more English than Spanish while the majority of the younger children used much more Spanish than English. Code-switching was not considered to be a deviation. In both Spanish and English developmental deviations were a strong majority of all deviations—77.1% in Spanish, 62.3% in English.[3] They were followed in number by interference deviations, 14.4% in Spanish, 18.7% in English. The smallest category was that of the dialectal deviations — 8.5% in Spanish and 13.0% in English. Thus, in both languages the same order obtains among the three categories: (1) developmental, (2) interference, (3) dialectal. Indeed the percentages for these categories is also similar for the two languages. The greatest disparity occurs in the percentage of developmental errors. The fact that this percentage is higher for Spanish may be due to the fact that most of our Spanish errors come from the speech of the younger children while the English errors are more evenly distributed among the entire group.

When we designed this study we expected to find that interference accounted for a large proportion of the deviations. Consequently we formulated the following hypothesis:

---

[1] The number of phonological deviation tokens was not computed.

[2] Natural conversation alone was analyzed here because the children's elicited speech differed radically from their natural speech and did not appear to reflect their competence.

[3] An additional 2.7% of the English deviations may have been either the result of development or interference and 3.3% the result of either dialect patterns or interference.

1. Interference phenomena at the level of competence will be more prevalent in the English than in the Spanish of the children studied.
2. Fewer interference phenomena at the level of competence will be discoverable in the English of the children studied with each year of schooling.
3. More interference phenomena at the level of competence will be discoverable in the Spanish of the children studied with each year of schooling.
4. Performance errors (types and tokens) will be more prevalent in the English than in the Spanish of the children studied.
5. Fewer performance errors (types and tokens) will be discoverable in the English of the children studied with each year of schooling.
6. More performance errors (types and tokens) will be discoverable in the Spanish of the children studied with each year of schooling.
7. Performance errors (types and tokens) in Spanish will occur most frequently when the topic is associated with the classroom.
8. Performance errors (types and tokens) in English will occur most frequently when the topic is associated with the home.

However, unlike Cohen (1975:214-218) we found few deviation tokens which appeared to be the result of interference. Consequently we do not have sufficient data to test our hypotheses adequately. Moreover, in the course of our study we found that the distinction between competence and performance was not a useful one in dealing with children who were still in the process of acquiring both their languages. The distinction was not useful for several reasons. First, the metalinguistic awareness of the children, especially the younger children was not highly developed and it is upon informants' judgements based on metalinguistic awareness that linguists have primarily relied in distinguishing competence from performance. Second, it was not possible to obtain sufficient data to infer competence using natural conversation especially since the children's competence was in flux and thus not necessarily identical from one recording session to the next. Third, for the purposes of this study it began to seem irrelevant to attempt to distinguish a language learner's knowledge of a rule (competence) from his ability to use this rule appropriately in speech (performance). What evidence then may we adduce with respect to the original hypotheses? Our data support a general hypothesis that interference is more prevalent in English than in Spanish, but the difference between the percentage of interference errors in English (18.7%) and Spanish (14.4%) is not great. Our data do not support a hypothesis that interference in English decreases with years of schooling. Table III indicates that children with more years of schooling make as many interference errors as children with fewer years of schooling. However, we must note that since we have dealt here only with natural conversational data because of poor results is test situations, we have no control on how much each child said or what constructions he used Our data do not allow us to address a hypothesis that interference errors in Spanish will increase with increased years of schooling, for our older informants conversed very rarely in Spanish at home, at school, or at the project site. Finally, our data do not support a hypothesis that the frequency of interference errors is affected by topic. In our data topic neither affected interference errors nor codeswitching.

When we undertook this project we expected to find a group of children who could speak neither English nor Spanish well. We anticipated finding a good deal of interference from Spanish in the English of the younger children and from English in the Spanish of the older children. What we discovered was a group of children who had a good command of both Spanish and English with very little evidence of interference. Deviations from standard Spanish and standard English did occur. However, most of these deviations were developmental in nature. Interference errors did occur but they were few in number as were dialectal deviations.

What are the implications of these findings? Firstly, they support the conclusions of Fathman (1975) and others that few errors in a language are caused by interference from another. This finding is important for language teachers and for creators of foreign language learning materials. Dulay and Burt, Taylor, Fathman and others have shown that there is no need to worry about a first language interfering with the learning of a second. We have shown that it is equally needless to worry about a second language interfering with a first. We found, much to our surprise, that the children of our community have little need of additional basic instruction in Spanish or English structure.[1] They are quite competent. In both languages they would profit most from instruction in reading and writing with some strong vocabulary building.

Secondly, our findings are important for developmental psycholinguists. The fact that many developmental errors remained in children as old as ten years suprised us. There are three possible explanations:

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[1] Instruction in the use of prepositions would however be useful.

> 1. It is perfectly normal for some developmental errors to linger throughout the elementary school years and the common assumption that children have already acquired the basic grammar of their language completely by the time they start school, is simply not true.
>
> 2. The mind takes longer to acquire two languages simultaneously.
>
> 3. Normal developmental features remain longer or even become fossilized in situations where a language is weakly monitored.

Thirdly, our findings are especially important for bilingual teachers as a significant proportion of the deviations are dialectal. In fact, if phonological deviations are included, dialect is an extremely strong source of deviation in Spanish.

Similar to the case of the Black children in their classrooms, Mexican-American children have been corrected in their Spanish by countless bilingual teachers. The mere fact that their system is different from that of the teacher is not an indication that the children have a language deficiency. Some have gone so far as to write Spanish textbooks designed for the Spanish-speaking in the United States. In the preface of Espanol Para Hispanos, Pauline Baker says the following when translated into English.

> We are experiencing a sad decadence of the Spanish spoken in the U.S..... Each day it becomes more and more necessary to correct the errors of the bad Spanish which should be eradicated, and develop a good Spanish which is what should be used. ... The goal towards which I have dedicated this book is to help the Spanish-speaking North American pupils to speak and write their home language well.

If the standard language must be taught, it should not be with concomitant denigration of the Chicano dialect. Ideally, the Spanish-speaking teacher should come from the community and speak the same dialect. Equally acceptable would be a teacher, perhaps a speaker of a different dialect of Spanish who does not attempt to correct the child's dialect but who respects and accepts it. We do not think it absolutely necessary for the teacher to speak the same way as long as there can be effective communication and mutual respect in the classroom. Garcia (1975:71) says, "The first logical step for the teacher is to give, express, or manifest the recognition and acceptance of the child's home dialect. ....The teacher should express and demonstrate respect for everything that the Chicano child brings with him and this certainly includes his most prized possession, his language."

Dr. Bowen states:

> Children are encouraged not to denigrate or reject the Language of their parents, for this would imply a value judgement unfavorable to those who speak the dialect of the home. There is ample evidence to support the fact that the value of self-respect and identity that accompanies the comfortable acceptance of one's personal linguistic situation is approprpriate and normal. The Blacks, like the Hispanos (Chicanos), and indeed like all of us, the English-speaking Anglos included, need the security of self-assurance, and the conviction that we occupy a position of respect in our community, and that our particular sub-community makes a valid and acceptable contribution to the larger social and political units we are associated with. When this self-respect is lost or denied, the result is discouragement, apathy, frustration, or anger. (1971:4).

Bilingual teachers must become aware of the dialectal variations of their students, or the children will be just as unhappy in their bilingual classrooms as they were in their monolingual classes. Dialect differences should be brought out in class as enrichment for everyone. People must have tolerance for what is different and above all, teachers must be free of language prejudices. Instead of trying to change the dialect of millions of people, why not change everyone's attitudes to understand that DIFFERENT does not mean INFERIOR! In addition, certain variants of Spanish should be introduced in Spanish classes for English-speaking Americans according to which group of Spanish speakers they would most likely come into contact with.

Garcia (1975:75) provides some excellent suggestions which are certainly worth considering:

> 1. Accept the Spanish dialect that a Spanish speaking Chicano child brings with him to school. This dialect is so precious that it should not be disturbed, corrected, or tampered with in any way by language teachers, especially by those who are responsible for teaching the Spanish language. The child's speech is his home, his comfort, his mother. Schooling must add to the repertoire of learned speech behaviors, but any attempt to subtract from the Chicano's speech repertoire makes the ultimate ends of schooling more difficult and in many cases impossible to attain.
>
> 2. Provide the proper natural environment and maintain their active participation in language development.
>
> 3. Use the oral efficiency that children bring to school as the means of developing a complementary efficiency in reading and writing. Given a situation where they need to do it, Chicano children, like any other children, are natural polyglots and can learn two or three languages. To extend, refine and enhance the oral arts and skills children already possess, and this certainly includes the Spanish Southwest dialect, should be the first obligation of the people responsible for teaching children of any ethnic group.

Spanish-speaking children already may feel that they are "inadequate" because they do not speak English as well as other children, telling them that their Spanish is not acceptable will only provide another source for low self esteem.[1]

---

[1] Among the children we studied the importance of fostering pride in the native language was very obvious. Many of the children claimed they did not speak Spanish and when asked why they said they did not like it and did not wish to speak it. Older children in fact spoke it very rarely.

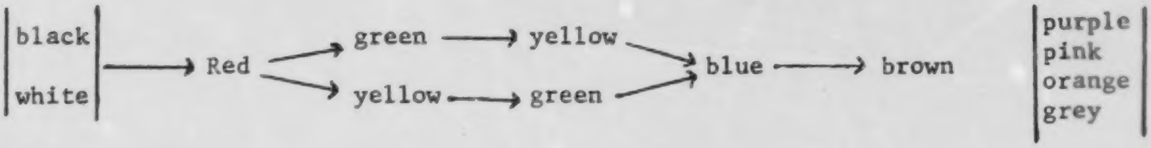
Chapter IV

THE ACQUISITION AND USE OF SPANISH AND ENGLISH COLOR TERMS

1. Introduction

Color was traditionally considered to be a uniform space which languages arbitrarily divide by color names (e.g., Gleason 1955:4-5). More recently, however, by examining the foci of color categories rather than their boundaries, Berlin and Kay (1969) derived a universal evolutionary sequence for the encoding of perceptual categories into basic color terms. Berlin and Kay compare their "phylogenetic" theory of development with the ontogenetic Jakobson-Halle (1956) theory of phonological development and speculate that the proposed evolutionary sequence of color category encoding may be replicated ontongenetically.

To our knowledge there are very few published studies relevent to the validation of this speculation. Istomena (1963), in a study of color term acquisition in which forty Russian two to three year olds were asked to match three cups of a single color to their names, found that "connections are established earlier between the words red, yellow, green, and dark blue[1] and the colors they represent, and later between the words orange, light blue, and violet and the colors they represent." This acquisition sequence (while less differentiated) is similar to the Berlin and Kay evolutionary sequence, namely:



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[1] There are separate words for "dark blue" and "light blue" in Russian (EFM).

Kirk, Hunt, and Lieberman (1974) tested 246 five year olds attending Head Start or nursery school classes for the semantic mastery of the color terms red, orange, yellow, blue, brown, and green by heard identification and spoken identification of a set of six colored blocks. They found that orange and red rank highest for both modes of showing semantic mastery, green and blue lowest, while brown ranks at the top of correct listening identifications but not of spoken identifications (26% of the black Head Start children called the brown block black and 54% of the naming errors of these children on this block came from calling it black). These data are greatly at variance with the Berlin and Kay sequence.

Heider (1971) and Mervis, Catlin, and Rosch (1973) addressed different developmental implications of the Kay and Berlin study:

(a) "That foci for color categories become established and are stablized early relative to boundaries, and

(b) That focal judgments are always more stable than boundary judgments."

Both hypotheses were confirmed.

The present research was designed to study the acquisition of semantic mastery of the domain of color in Spanish and English among Mexican American children. Data were collected on color modifiers and secondary color terms as well as on basic color terms in an attempt to answer the following questions:

1. What is the relationship between the acquisition of Spanish and English color terms?
    a. Are the Spanish and English lexica mastered sequentially or simultaneously?

   b. Are basic color terms mastered in the same order in Spanish and in English as an ontogenetic generalization of the Berlin and Kay findings would suggest?

2. Do the children have one semantic system with dual phonological representations or two separate semantic systems?
3. Is there interference from one color lexicon in the other color lexicon?
   a. If such interference exists is it at the community level (i.e., borrowing) or at the individual level? If the latter, does it exist at the level of competence or performance?
4. How extensive are the children's color lexica in both Spanish and English?

2. Materials and Procedures

The stimulus materials used in this study were a set of over 250 matte finish Munsell color chips of ten major hues (5R, 5YR, 5Y, 5GY, 5G, 5BG, 5B, 5PB, 5P, and 5RP) at varying value (eight steps) and chroma (up to six steps) plus an achromatic series. All chips were mounted individually on white cardboard squares. Color terms were first elicited from each child without the use of the stimulus materials. Then those children under five were shown a set of eleven chips (R4/12, YR6/12, YR4/6, Y8/12, G5/8, B5/6, P2/6, RP7/8, BW2/0, BW5/0, BW9/0), one representing each of the eleven basic color terms and were asked first to name them all and then to point to them when named by the researcher. The task was presented in Spanish on one occasion; in English on another. The children five years of age and older were given the entire set of chips in randomly ordered stacks and were asked to select all the chips designated by the term given by the researcher. From those they selected they were asked to pick a best example. They were allowed to select several such "best" examples if they felt several were equally good (most only picked one). One term was presented to a child per session, and although in the course of a day a child might be presented with more than one term, no session immediately followed another. Futhermore, Spanish and English terms were not presented in the same day to the same child. Illumination for this task was indirect natural daylight. Supplemental data came from the observation of color term usage in natural situations.

3. Results

The color lexica of the children in both Spanish and English are small. In addition to the eleven basic colors, the following monolexemic terms were elicited in English: gold, silver, copper, peach, maroon, violet, maple, tan, caramel, lemon, and lime, the latter five from one informant each. The polylexemic terms included brick red, sky blue, navy blue, blue green, olive green, lime green, blue violet, red orange, lemon yellow, and yellow green, as well as a series of compound terms with gray as a first member (one series had a gray cast). These terms were elicited from the older informants and none were elicited from more than three individuals. A number of children volunteered nonstandard polylexemic expressions. Examples are: lemon green (compare to Spanish verde-limon), green orange, lime yellow, lemon purple, orange green, violet green, brown yellow, green yellow. The latter two are examples of a widespread phenomenon. The children are not aware of which two-word compounds are standard set phrases and which must be formed by suffixing -ish to the first member. All but the very youngest children were familiar with and spontaneously used the basic color modifiers dark and light, although a few used these terms in ways in which adults would not (e.g., light and dark white, light and dark black, dark light blue). But only a couple of children used bright or medium spontaneously, although a few more understood them. None of the children knew the terms deep, pale, opaque, dull, intense, vivid, etc.

In Spanish in addition to the colors designating the eleven basic perceptual categories (there are two terms for two of these categories rojo and colorado 'red' and gris and plomo 'grey,' plomo is known only to a few informants while colorado is known to more informants but is not much used), the following monolexemic terms were elicited: dorado, lila, plateado, and beige, from five, four, three, and one informants respectively. The polylexemic terms included: verde limon, verde aguacate, azul cielo, azul marino. These were elicited from not more than four informants each, the first from kindergarten aged children (the teacher's aide in the newly started bilingual program used this color name frequently), the others from older informants. A number of nonstandard polylexemic terms were also elicited of which azul-verde and verde azul were the most common (these terms appear to be accepted dialect borrowings from English). Additional examples were anaranjado-amarillo, café-negro, morado-anaranjado, negro-rojo, azul-blanco, rojo-verde, etc. Standard Spanish syntax does not permit the formation of compound terms on this pattern, although compounds with derived adjectives as the second member may occur, for example, azul verdozo. The latter compounding pattern is, however, not known by the children. The basic color modifiers bajo, subido, oscuro, and claro are in the children's lexicon, but they do not appear to be as sure of their denotata as they are of the denotata of dark and light. Moreover, often the syntax of a composite term containing these lexemes was nonstandard, such expressions as bajo café, subido verde, and claro azul, being quite frequent (these forms are probably generated by analogy to English expressions of the form adverb plus adjective). Terms such as opaco, palido, intenso, brillante, etc., are not used, but one older girl did volunteer pesado and suavecito.

Interestingly, in the course of elicitation sessions in Spanish, English terms were volunteered and vice versa. Older children usually noted these language switches spontaneously and either corrected themselves or stated that they had a designation for a particular category only in the intrusive language. Younger informants did not appear to take note of such language switches. In casual speech the same type of language switching took place. That is, an English color word appeared in a Spanish sentence or a Spanish color word in an English sentence. The former situation was, however, far more frequent. Additionally, many children when asked to select all the chips of a particular color confirmed their understanding of the task by switching languages. Thus, if we asked "pick all the greens" the child might ask "los verdes?" (This type of language switching seems to be an instance of a more general phenomenon whereby the children use code switching where monolinguals use paraphrase, in this instance to confirm their understanding, see Chapter V for further discussion of this point.)

The data concerning the identification of labels with perceptual categories drawn from our sample of children under five were disappointing. We found, as did Istomina (1963) that children learn labels before they learn to attach these labels to categories in a stable manner. However, perhaps because of our very small sample of informants, eight in number, we found no order among the basic color terms. Each child exhibited his own pattern. In general (though not without exception) we found that most children seemed to be learning the English color terms faster than the Spanish color terms. However, acquisition of the second set of color terms did not appear to await mastery of the first. Nor does the child appear to learn terms denoting the same or similar perceptual categories in the same order.

The data concerning the identification of labels with perceptual categories drawn from our sample of children over five are presented in Appendices 1 and 2.

4. Discussion

Let us now consider the first question we sought to answer, "What is the relationship between the acquisition of Spanish and English color terms?" It would appear that there is no set intra language or cross language order among basic color terms with respect to the acquisition of such mastery as enables a child to name and identify a set of eleven color chips representing the eleven basic perceptual categories. There does however appear to be an order among the basic color terms with respect to the development of stable focal denotata and the stabilization of boundaries which is very similar in Spanish and English (see Appendix 1). Purple, blue, and gray appear to be stablized least and last, whereas red, orange, and yellow are stabilized first. White in general appeared to be one of the first terms acquired although our data with respect to white are slightly contradictory and those for black are extremely so and are perhaps unreliable as in a number of instances our younger informants exhibited greater uniformity in their choices than our older informants. It may be that variations in lighting have a greater effect on the appearance of the least saturated chips and the most saturated chips, particularly the latter. If so, our data might, with the notable exception of the position of orange (a term also shown to be acquired early in the data of Kirk, Hunt, & Liberman, 1974), offer support for the ontogenetic generalization of the Berlin and Kay sequence. Certainly it offers additional support for the hypotheses advanced by Mervis, Catlin, and Rosch. The same colors whose foci are stablized first in the two languages also show the greatest degree of convergence in their foci when distances between the Spanish and English foci are compared for each informant. On this individual basis, orange (.34), white (.44), black (.52), red (.54), and yellow (.67) are the most convergent, while blue (1.46), grey (1.66), and purple (1.83) are the least convergent (see Appendix 3).

To question two, "Do the children have one semantic system or two?", the answer would appear to be "one." The focal choices are almost identical and the variations in color boundaries between the two languages do not appear to be greater than those between different children in the same language, nor do they appear to follow any particular pattern. These facts, together with the observation that the children often code-switch when using color terms (apparently using whichever phonological representation of a color sememe first comes to mind) and the observed code switches for clarification of our instructions in the tasks, indicate to us that the children have but one system.

As the children's parents differ widely in residential history and in ability in speaking English we would have expected a considerably lower degree of similarity between the children's semantic systems for English and Spanish than we found. Half of the parents are self-rated as non-English speaking and only 3 of our 11 families (representing 5 of our 23 informant children) rated themselves as speaking some English in the home.

As would be expected, the distance between English and Spanish foci for each child decreased with age (and thus with increased exposure to the English-dominated school) and by the amount of English spoken in the home (as self-rated by the parents). The factor of age was more important.

The most extreme variation would be expected in the case of junior informants neither of whose parents are self-rated as English speakers. We have 5 informants in this class, and their mean inter-focal distance is 1.38--on the average their foci are inconsistant by only slightly more than one chip. Considering the conditions of the test we feel that this distance is insignificant.

Finally, with respect to question three, "Is there interference from one color lexicon in the other color lexicon?", the answer is "yes." Such interference occurs both at the community level as borrowing (see for example, verde azul) and at the level of the individual. In the latter case, it occurs both at the level of competence (for example, the formation of compound terms consisting of two unmodified adjectives in Spanish and the inclusion of such terms as lemon green in the English lexicon) and at the level of performance (for example, the use of such terms as bajito café or red dark). As the examples show, interference occurs both from Spanish in English and vice versa.

Perhaps of greatest importance to the educator, is question four, "How extensive are the children's color lexica?" We found that even the older children have quite restricted color lexica in both languages. Not only are more obscure monolexemic terms unknown but so too are basic compounding patterns and color modifiers. While we have not carried out formal elicitation procedures in other domains due to time limitations and the boredom thresholds of the children, it is our impression from analyses of natural conversations that similar results would be found in many if not most semantic domains. The children appear to command basic terms, those necessary for successful communication in ordinary conversational situations. They do not appear to have the more elaborated vocabulary one is apt to encounter in literature, even children's literature.

This lack may prove to be a hindrance to success in formal educational tasks, especially to the development of effective reading skills.

Appendix 1: Measures of Uniformity

Here we compare the ordering of the eleven basic color terms on the basis of three measures of uniformity. Data are presented for Spanish and English; for all 21 informants, for eight "junior" informants (from five to seven years) and eight "senior" informants (from nine to thirteen). Note that only in the order of terms is the 21-informant case comparable to the 8-informant cases since one expects uniformity scores to be decreased by taking more informants.

(1) Boundary uniformity is measured by dividing the number of chips chosen as examples of a given color by the number of chips chosen by two[1] or more informants, thus a score of 1.00 indicates that no chips were picked by a minority.

(2) Degree of agreement as to focal chip is measured in three ways: (a) by the number of informants choosing the most frequently chosen chip as focus, (b) by the number of informants choosing the two most frequently chosen chips as focus, and (c) by the number of chips chosen as focus by some informant.

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[1] Two is used throughout as a minimum number of informants to establish a category in order to eliminate random choices.

1. Boundary uniformity

(number of chips chosen by 50% or more) ÷ (number chosen by 2 or more)

	All 21 informants		8 junior informants		8 senior informants	
1.	yellow	(.63)	yellow	(1.00)	yellow	(1.00)
2.	orange	(.50)	orange	(1.00)	purple	(.71)
3.	red	(.50)	pink	(.71)	orange	(.67)
4.	purple	(.34)	red	(.67)	white	(.60)
5.	white	(.20)	grey	(.38)	red	(.57)
6.	brown	(.20)	purple	(.35)	blue	(.50)
7.	pink	(.19)	white	(.25)	pink	(.42)
8.	grey	(.19)	black	(.25)	grey	(.39)
9.	blue	(.15)	green	(.23)	green	(.38)
10.	black	(.11)	brown	(.23)	brown	(.38)
11.	green	(.10)	blue	(.18)	black	(.22)

1.	amarillo	(.40)	rojo	(.67)	amarillo	(.75)
2.	rojo	(.31)	anaranjado	(.60)	blanco	(.71)
3.	anaranjado	(.30)	blanco	(.57)	anaranjado	(.67)
4.	blanco	(.30)	amarillo	(.50)	morado	(.67)
5.	azul	(.27)	gris	(.50)	gris	(.60)
6.	rosa	(.26)	café	(.50)	negro	(.60)
7.	morado	(.23)	rosa	(.46)	rojo	(.56)
8.	gris	(.23)	azul	(.43)	rosa	(.50)
9.	café	(.18)	morado	(.35)	café	(.47)
10.	verde	(.13)	verde	(.27)	azul	(.38)
11.	negro	(.11)	negro	(.25)	verde	(.36)

2. Focal uniformity

A. Number of informants chosing the most frequently chosen chip as focus.

	All 21 informants		8 junior informants		8 senior informants	
1.	orange	(19)	orange	(7)	pink	(8)
2.	black	(17)	black	(7)	orange	(7)
3.	white	(15)	red	(5)	red	(6)
4.	pink	(13)	white	(5)	white	(6)
5.	red	(11)	pink	(4)	black	(5)
6.	yellow	(11)	yellow	(4)	green	(5)
7.	green	(9)	green	(3)	brown	(4)
8.	brown	(8)	brown	(2)	yellow	(3)
9.	purple	(6)	purple	(2)	blue	(3)
10.	grey	(6)	blue	(2)	purple	(2)
11.	blue	(5)	grey	(2)	grey	(2)
1.	blanco	(20)	blanco	(8)	anaranjado	(8)
2.	anaranjado	(17)	rojo	(6)	blanco	(7)
3.	amarillo	(15)	anaranjado	(5)	negro	(7)
4.	negro	(13)	amarillo	(5)	verde	(7)
5.	verde	(13)	rosa	(5)	amarillo	(6)
6.	rojo	(12)	negro	(4)	rosa	(6)
7.	rosa	(12)	verde	(3)	café	(5)
8.	café	(8)	gris	(3)	rojo	(4)
9.	azul	(6)	café	(2)	azul	(3)
10.	gris	(4)	azul	(2)	gris	(3)
11.	morado	(4)	morado	(2)	morado	(3)

B. Number of informants chosing one of the two most frequently chosen chips as focus.

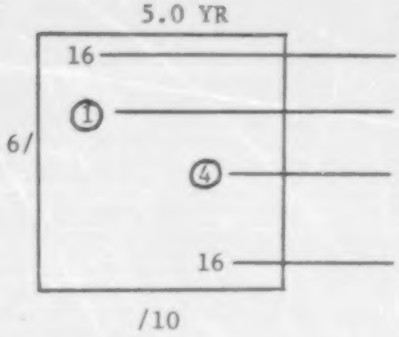
	All 21 informants		8 junior informants		8 senior informants	
1.	orange	(20)	orange	(8)	orange	(8)
2.	black	(19)	black	(8)	red	(8)
3.	red	(18)	red	(7)	pink	(8)
4.	yellow	(18)	pink	(7)	black	(7)
5.	white	(17)	white	(7)	white	(7)
6.	pink	(16)	yellow	(7)	green	(6)
7.	green	(13)	green	(5)	yellow	(5)
8.	brown	(11)	brown	(4)	brown	(5)
9.	purple	(9)	purple	(4)	blue	(5)
10.	grey	(9)	blue	(3)	purple	(4)
11.	blue	(8)	grey	(3)	grey	(4)
1.	anaranjado	(21)	anaranjado	(8)	anaranjado	(8)
2.	blanco	(21)	blanco	(8)	blanco	(8)
3.	amarillo	(21)	amarillo	(8)	amarillo	(8)
4.	rojo	(19)	rojo	(7)	rojo	(8)
5.	negro	(16)	negro	(6)	negro	(8)
6.	rosa	(16)	rosa	(6)	rosa	(8)
7.	verde	(16)	verde	(5)	verde	(8)
8.	café	(11)	gris	(5)	café	(6)
9.	azul	(11)	café	(4)	azul	(5)
10.	gris	(8)	azul	(4)	morado	(5)
11.	morado	(7)	morado	(4)	gris	(4)

C. Number of chips chosen as focus by someone.

	All 21 informants		8 junior informants		8 senior informants	
1.	orange	(3)	orange	(2)	pink	(1)
2.	red	(4)	white	(2)	orange	(2)
3.	yellow	(4)	black	(3)	red	(2)
4.	white	(5)	pink	(3)	white	(3)
5.	black	(5)	red	(4)	black	(3)
6.	pink	(7)	yellow	(4)	yellow	(4)
7.	purple	(8)	brown	(6)	green	(4)
8.	green	(10)	blue	(7)	brown	(5)
9.	brown	(10)	grey	(7)	blue	(5)
10.	blue	(11)	purple	(7)	purple	(5)
11.	grey	(12)	green	(8)	grey	(6)
1.	blanco	(2)	blanco	(1)	anaranjado	(2)
2.	amarillo	(2)	anaranjado	(2)	blanco	(2)
3.	anaranjado	(3)	amarillo	(2)	amarillo	(2)
4.	rojo	(3)	rojo	(3)	rojo	(2)
5.	rosa	(5)	negro	(4)	negro	(2)
6.	verde	(6)	rosa	(4)	rosa	(2)
7.	negro	(8)	verde	(4)	verde	(2)
8.	café	(8)	azul	(5)	café	(4)
9.	azul	(8)	gris	(5)	azul	(5)
10.	gris	(11)	café	(6)	gris	(6)
11.	morado	(12)	morado	(6)	morado	(8)

Appendix 2: Diagrams of Color Spaces

On each of the following pages are diagramed the chips chosen as examples of the eleven basic colors of English and Spanish. Each page presents both an English and a Spanish color. The number of informants listing a given chip as the best example (focus) of the color in question is given in the rectangle representing the chip and is circled. The number listing that chip as an example (best or not) of that color is also given. The upper left hand corner of each rectangle represents the English responses, the lower right the Spanish. For example:



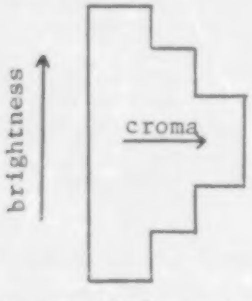
Sixteen informants considered 5.0 YR6/10 to be orange.

One considered it the best orange.

Four informants considered it the best anaranjado.

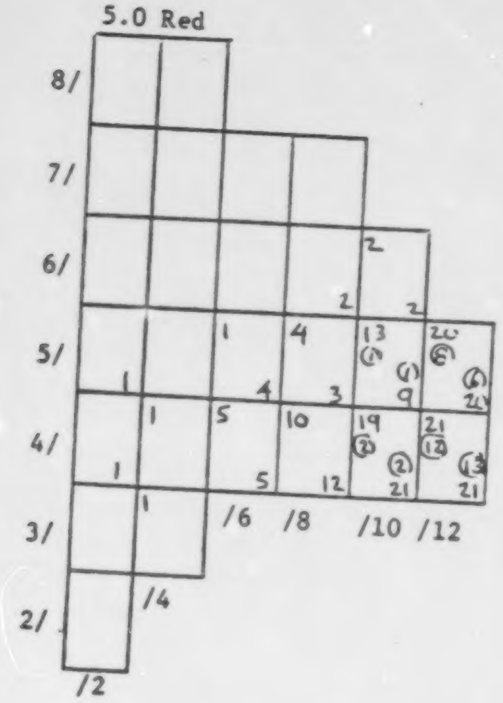
Sixteen considered it anaranjado.

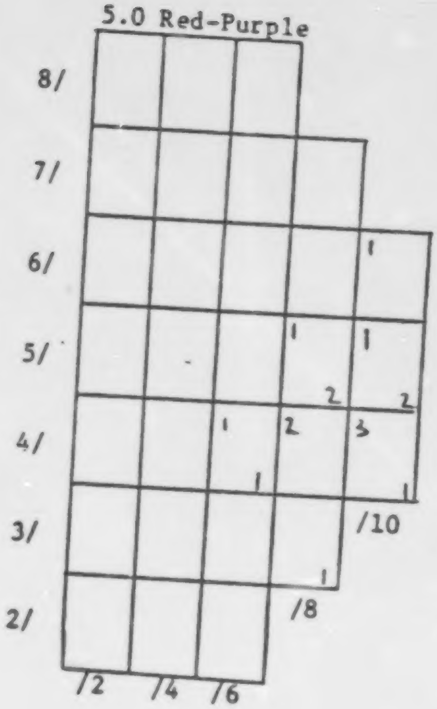
Chip charts are arranged in the standard manner (see Berlin and Kay 1968 or Munsell 1946).

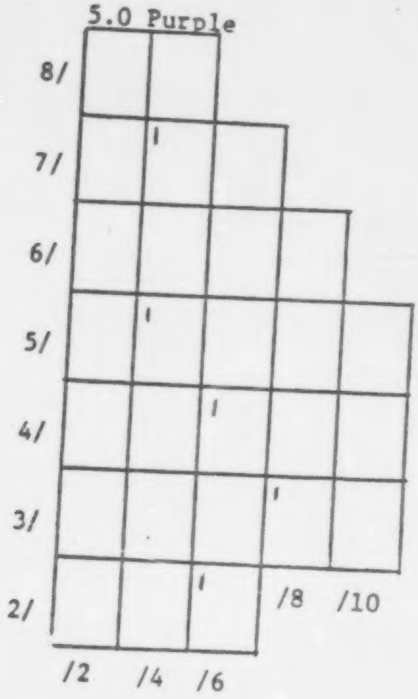


Different hues are presented on different charts, thus 5.0 YR6/10 and 5.0 R6/10 differ only in hue, but are equally bright and contain the same amount of their respective hues.

Twenty-one informants are represented for each color.



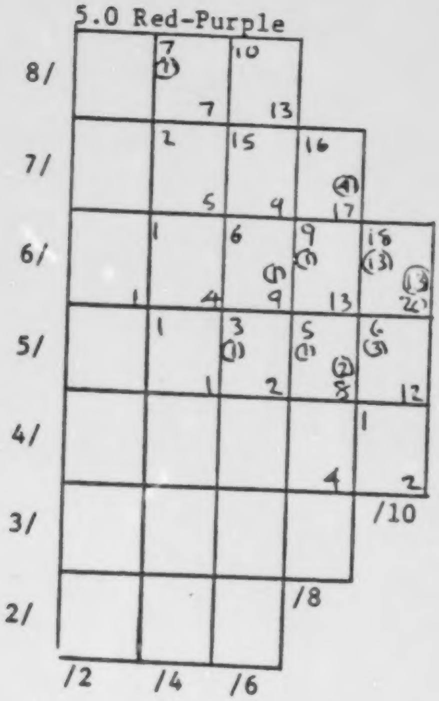




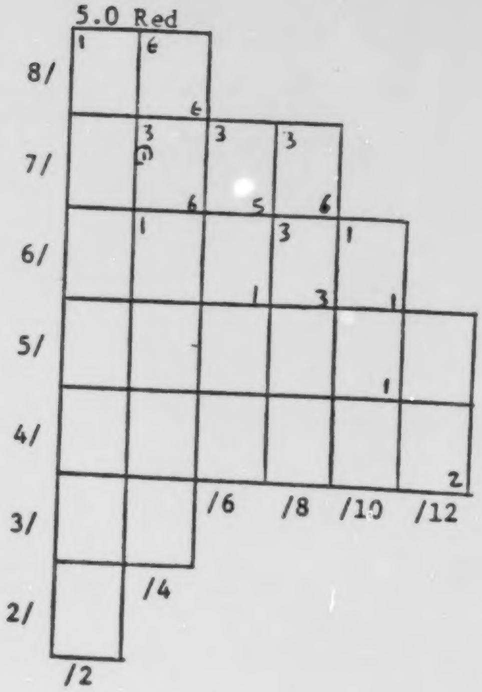
All the Purple chips listed were chosen by one informant. The Red-Purple chips listed were chosen by her and two others.

PINK/ROSA

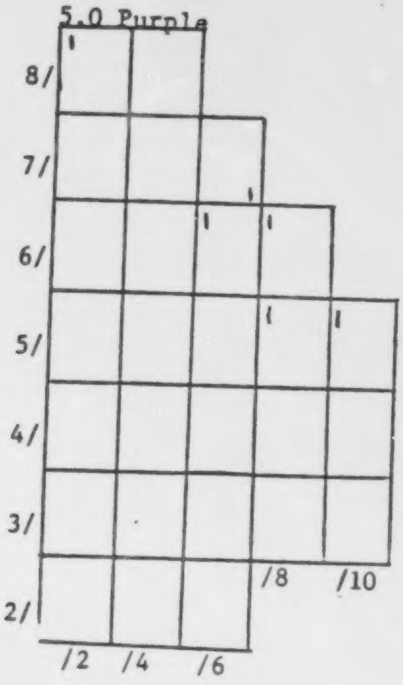
5.0 Red-Purple



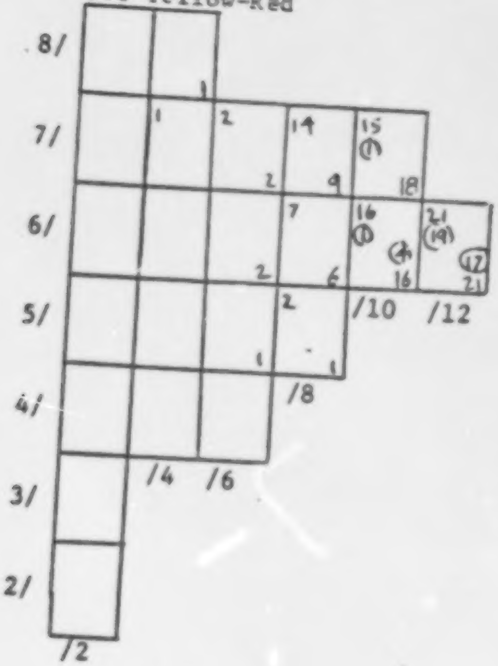
5.0 Red



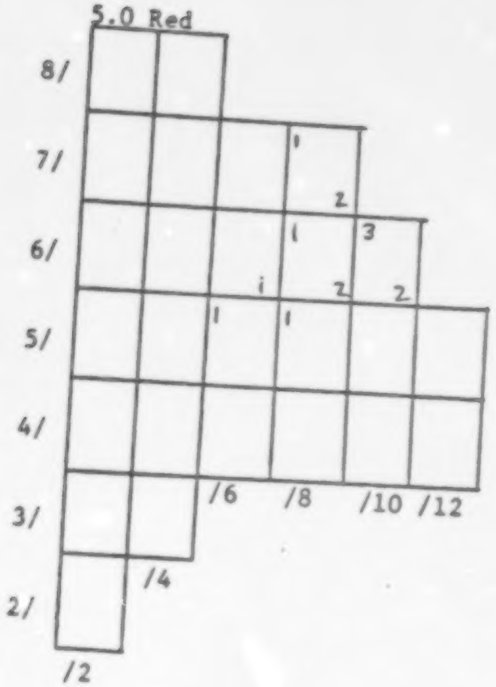
5.0 Purple

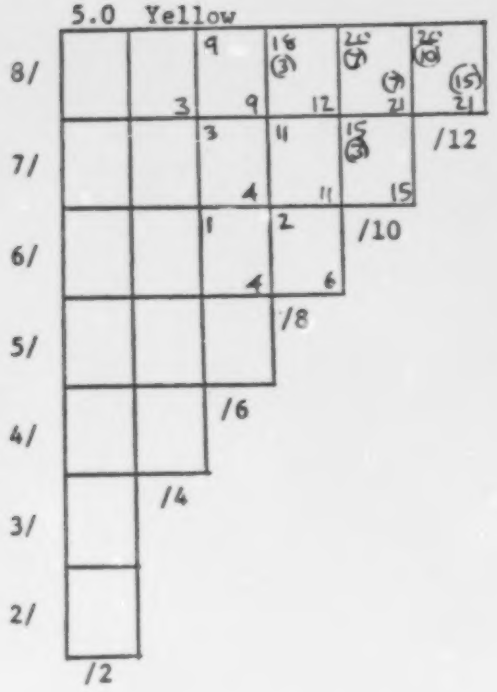


5.0 Yellow-Red



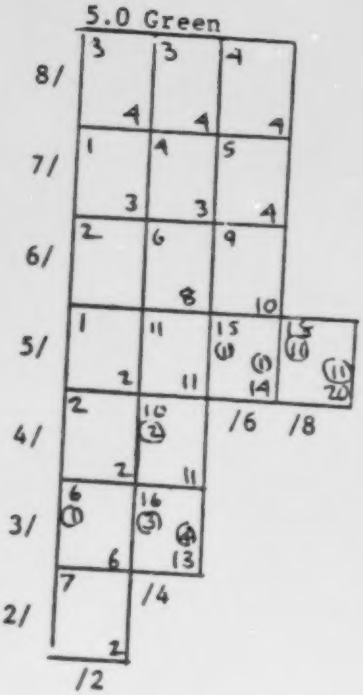
5.0 Red

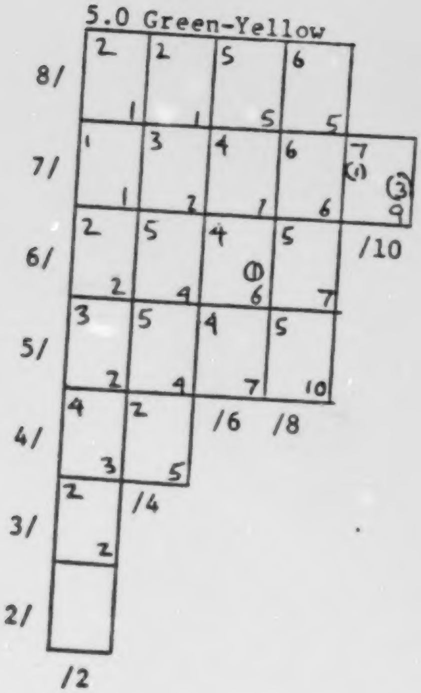


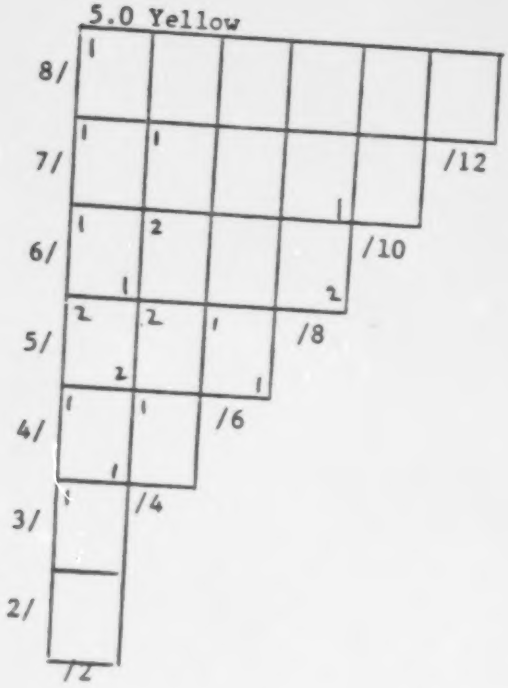


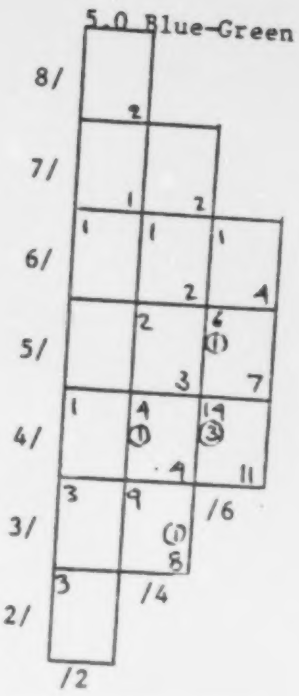
Six other chips were considered amarillo by various informants. None of them were listed more than once.

GREEN/VERDE





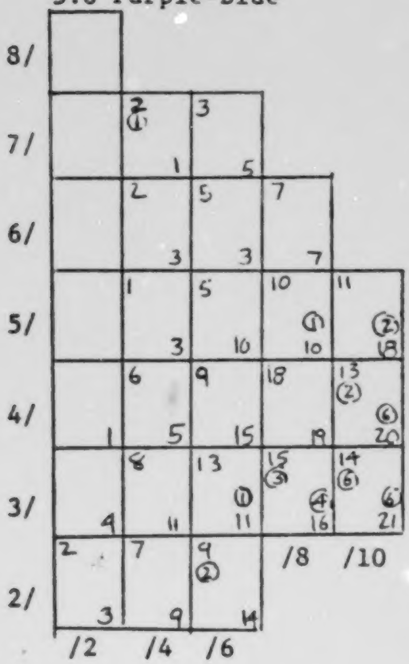




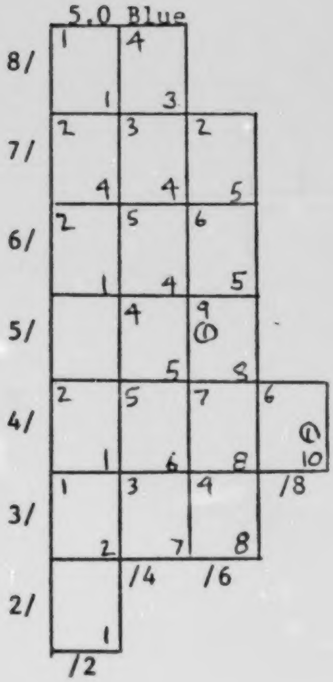
Twelve other chips were considered green and 21 verde by three informants each. None of them were listed more than once.

BLUE/AZUL

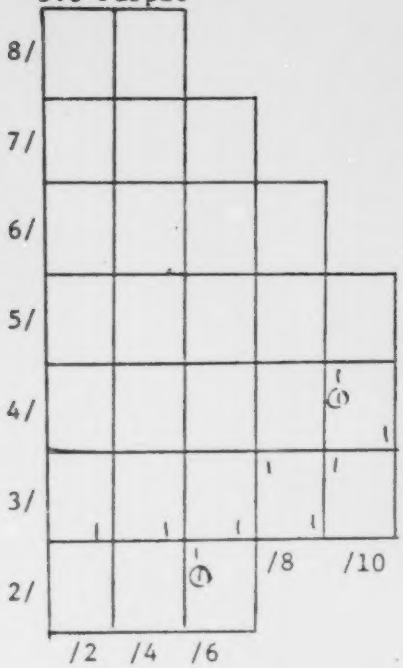
5.0 Purple-Blue



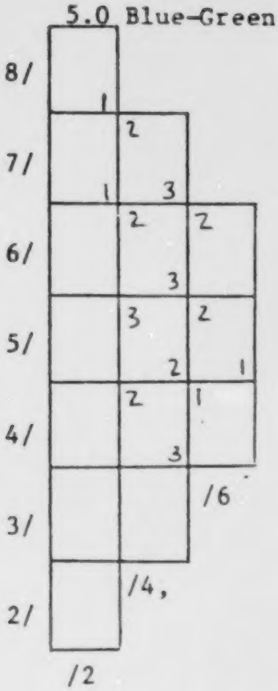
5.0 Blue



5.0 Purple



5.0 Blue-Green



Eight other chips were considered blue by one informant.

5.0 Purple

	/2	/4	/6	/8	/10
8/		1 3			
7/	2	① 4	2 4		
6/		2 3	3 6	3 4	
5/	2	5 ① 3	5 ① 9	6 8	8 10
4/	2	8 8	13 8	11 ① 14	12 13
3/	6 5	15 ① 12	17 ③ ① 16	17 ② ② 17	16 ② ③ 17
2/	5 ① 3	14 ③ ③ 14	15 ⑤ ④ 16		

5.0 Red-Purple

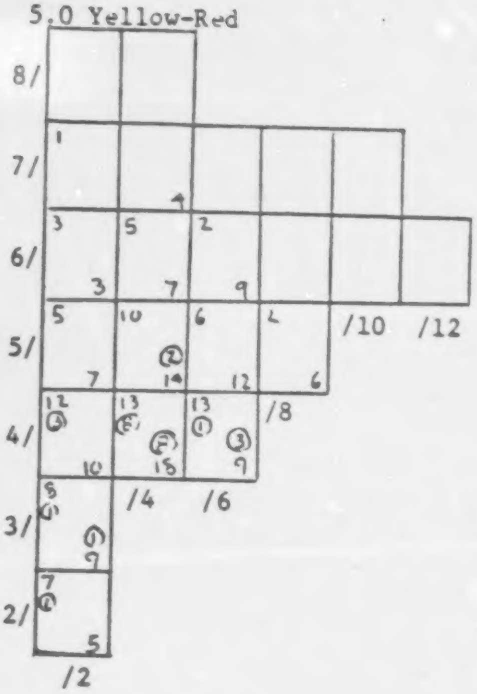
	/2	/4	/6	/8	/10
8/					
7/		1			
6/					
5/	1	1 2	1 2	2	2
4/	1	5 4	2 4	1 3	4
3/	3 5	7 3	11 ② 10	6 ② 8	
2/	2 4	11 ① 8	9 6		

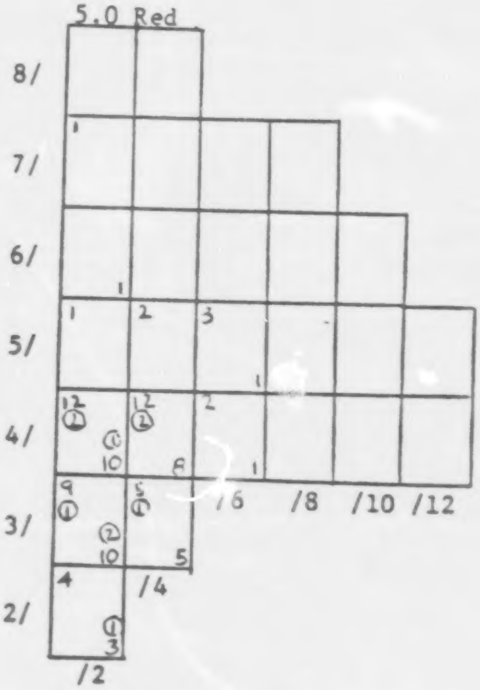
5.0 Purple-Blue

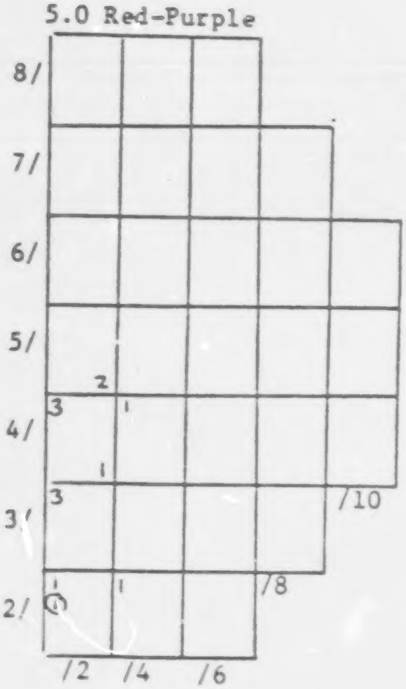
	/2	/4	/6	/8	/10
8/					
7/		1			
6/			1		
5/				1	
4/		1	1	2	1
3/	1 1	1 2	2 ① 2	1 1	1 ① 1
2/	3	4 ③ 1	2 2		

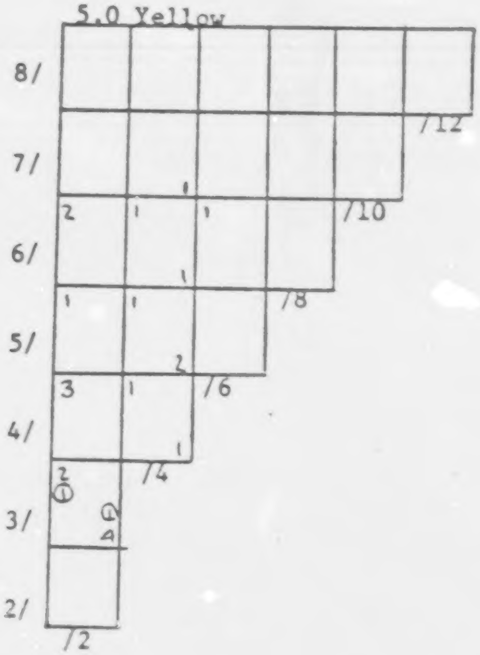
Nine other chips were considered purple and six morado by three informants each. None of them were listed more than once.

BROWN/CAFÉ





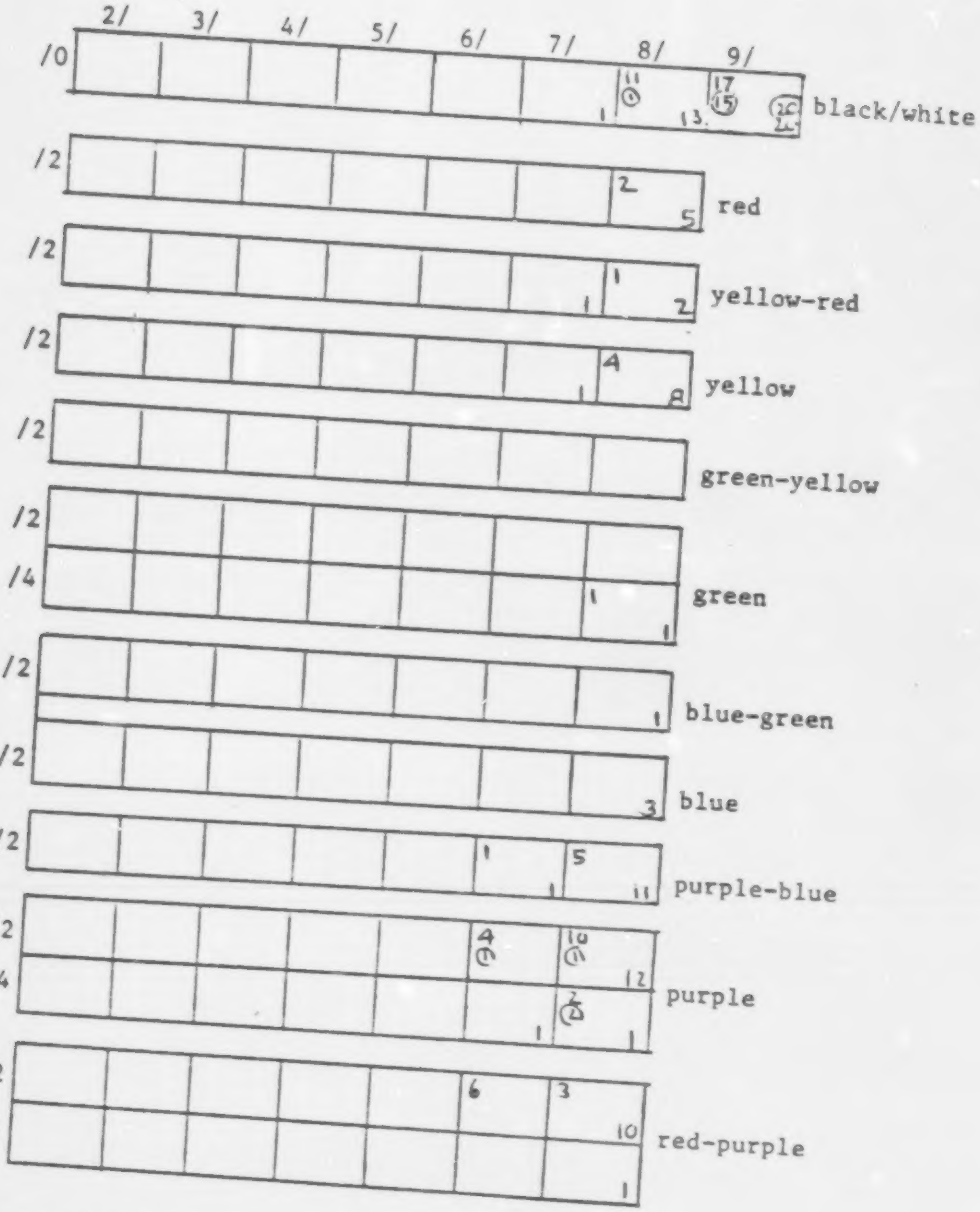




Six other chips were considered brown and three cafe by one and two informants respectively. One informant said there were no examples of cafe.

GREY/GRIS

	2/	3/	4/	5/	6/	7/	8/	9/	
/0		1	13 ⑥ ② 16	13 ① ① 15	15 ③ ④ 18	14 ⑦ ⑥ 15	5 5		black/white
/2			7 ① 10	11 ③ ① 17	13 ② 16	9 ① 9	4 6		purple-blue
/4	1	1	1 1	3 3	1 7	2 5			
/6		1							
/2			5 ② 5	9 9	9 9	5 6	2 1		purple
/4				1	1 3	1			
/2				1	1	3 3	4 5		red-purple
/4	1								
/2				1	3 3	1	1		red
/4					1				
/2	1	1		1	1	1 1	1		yellow-red
/2	1	1		1	1 2	1 1			yellow
/2				1	1 ① 1	1			green
/4				1	1				
/2				2 3	2 ①	1			blue-green
/4					1 ① 1				
/6				1	2 1				
/2	1 ①			6 9	2 2	1			blue
/4						1			



One informant stated that there was no good example of "white".

BLACK/NEGRO

	2/	3/	4/	5/	6/	7/	8/	9/	
/0	14 ⑯ ⑬ 17	14 ⑤ ③ 18							black/white
/2	3 ① 9	1	1						red
/4		1							
/2	5 ① 6	1 ① 2	1						yellow-red
/2	4 9	4 4							yellow
/2	2 ① 5	2							green
/4		2 1							
/2	2 4	1 2							blue-green
/4	1	2							
/2	1	2 1							blue
/2	3 ① 2	2							purple-blue
/4	1 2	1							
/6	1								
/2	6 ① ① 8	3 2							purple
/4	1	1	1						
/2	4 ① 4			2					red-purple
/4	1	2							
/6	2	2 1							
/2	1 2	2 2							green-yellow

Appendix 3: Distances Between Focal Chips

Distance between two chips is determined by $d = \sqrt{x^2 + y^2 + z^2}$ where x is the difference between the croma numbers for the two chips, y is the difference between the brightness numbers for the two chips, and z is the distance between the hues of the two chips. Thus the chips RP5/5 and R5/5 are considered to be 1 unit separated $(d = \sqrt{0^2 + 0^2 + 1^2})$, while RP5/5 and R4/4 are 1.73 units separated $(d = \sqrt{1^2 + 1^2 + 1^2})$. Although weighting the distance between RP5/5 and R5/5 the same as that between R5/5 and R5/4 is conceptually troublesome, this difficulty arises in only 30 of our 233 paired foci, and most pairs which differ in hue are low croma -- an area where the difference between hues is perceptually small.

average Spanish-English focal distance	Orange	White	Black	Red	Yellow	Brown	Pink	Green	Blue	Grey	Purple
1. All informants	.34	.44	.52	.54	.67	.80	.98	1.13	1.46	1.66	1.83
2. Junior informants	.50	.64	.60	.60	.82	1.10	1.43	1.10	1.50	2.16	2.01
3. Senior informants	.18	.43	.50	.44	.73	.59	.35	1.18	1.21	1.08	1.15

Chapter V

SOCIAL FUNCTIONS OF CODE-SWITCHING

1 Code Selection and Situation

In verbal interaction, language selection by adult bilinguals has been shown to be partially determined by participants, setting, and topic. Participants and topic have also been found to be important in the register variation of monolingual Anglophone children (Fischer, 1958; Weeks, 1971). Among the children we studied, it appears that the earliest systematic code switching is a function of the category "participants." Such switching occurs not only at junctures between conversations but also between and within turns of speaking. Examples of the latter two types are:

1. (CS, 7): "I want to play checkers."
   (E, Anglo researcher): "Ask Roli if you can."
   (CS, 7): "Puedo jugar checkers?" (to boy, 4)
   (Can I play checkers?)

2. (PA, 9): "You have to king me."
   (DH, 6): "Do what?"
   (PA, 9): "You gotta put one on top."
   Mira, cómete éste. (to boy, 4)
   (Look, eat this)

Three characteristics of participants are important: language proficiency, language preference, and social identity.

Inappropriate choice of language when addressing a monolingual is rare. For example, although upon first entering school, children with little prior experience with the Anglo community occasionally used Spanish with Anglophone school teachers and pupils, such behavior was no longer observed after the first month of classes. Children lacking even minimal facility in English quickly resorted to one of two strategies: silence and passivity or the use of non-verbal communication devices such as gesture to supplement one or two word telegraphic utterances. In determining whether it is possible to use a particular language with an individual, young children appear to rely on binary judgments of linguistic competence--either a person knows a language or he does not. Assessments of relative ability do not enter into their decisions about language choice as they tend to do among adults and older children. Thus, those children five or younger who were Spanish dominant spoke to the author in Spanish, the language in which they were most comfortable despite the fact that in most cases their English was more fluent than her Spanish. Older children make finer discriminations in selecting a code for use with a given individual. They seem to consider both the absolute degree of the hearer's proficiency in both languages and the relative language proficiencies of speaker and hearer. The older children in the second group studied used English almost exclusively in interacting with the author and Spanish almost exclusively in interacting with the four children of the group whose English was rudimentary.

Assessments of language facility also appear to account at least partially for the fact that with pre-schoolers, older children use Spanish predominantly. However, as this pattern obtains even in the case of the one pre-schooler in the second group who is equally proficient in Spanish and English, it would appear that the social identity[1] pre-schooler is also a factor. A random selection of fifteen one-hour recordings contained 188 utterances directed to pre-schoolers, 67% of which were in Spanish. The English addressed to pre-schoolers is generally restricted to short, routinized expressions, while Spanish is used for most utterances with high information content. Siblings of pre-schoolers tend to address more English to them than do other children. In our corpus, 43% of the 118 utterances addressed by siblings to pre-schoolers were in English. Only 22% of the 70 utterances addressed by non-siblings to pre-schoolers were in English. Perhaps in interaction among siblings the social identity pre-schooler is not always salient. Other identities such as sibling, may take precedence or identity itself may not be salient and code-selection may be more strongly influenced by other factors.

A good illustration of the fact that language preference and not merely ability is an important consideration is the fact that in the second community one child who is quite fluent in English but prefers Spanish is addressed far more frequently in Spanish than are her peers who prefer to use English. Furthermore, even the very young Spanish dominant children use English in addressing a young girl who, despite the fact that she knows Spanish, refuses to use it with anyone but a monolingual.[2]

Social identity is the third property of participants which influences language choice. There appears to be a characteristic pattern of language use associated with every identity relationship.[1] In most families, child-parent interactions take place in Spanish. Interactions between children and adults from the Mexican-American community also take place in Spanish.

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[1] Social identity is used here as in Goodenough (1969).

[2] This child's teenage siblings are, together with the teenaged children of the Mexican-American teacher's aide, the most integrated into the Anglo community. They use English almost exclusively even in the home despite their parents' strong preference for Spanish as the home language.

For teacher-pupil interactions, English has been established as the appropriate language. The advent of a bilingual-bicultural program in 1972 complicated the situation. The instructors in this program were a female Anglo teacher and a Mexican-American teacher's aide, both fluent bilinguals. The former has had great difficulty in sustaining conversations in Spanish with children who know English, especially those who began school before the bilingual program started. The latter has not, although children occasionally address her in English (see Table 3). The difference may be that there is an alternate identity relationship, child-Mexican-American adult, associated with the use of Spanish which can obtain between the children and the teacher's aide. The corresponding relationship between the children and the teacher, child-Anglo adult is associated with the use of English.

With the researchers, Anglos and Hispanos alike, who attempted to define for themselves an identity outside the children's previously established categories, the children generally used a mixed register in which discourse alternated between Spanish and English with frequent code-mixing and code-changing. However, when interactions with them were defined in terms of identities such as Mexican-American adult or Anglo adult, code-switching was minimal.

Identity also affects language choice in interactions among children. Shifting identity relationships among children are often marked by code alternation just as Blom and Gumperz (1972) have demonstrated among adults. Both peer and sibling interactions are carried on in a mixed register. Interactions between children which involve caretaker-child relationships are almost always in Spanish. We observed that if a younger child were hurt, he was comforted by an older child in Spanish even though an immediately preceding interaction between the children might have taken place in English. The following sequence is typical:

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[1] The use of the term identity relationship also follows Goodenough (1969).

3. (PA girl, 9): "Stop it Roli. You're stupid!"
(RA brother, 3): "You stupid Pat."
(PA): "Don't hit me!" (laughing and holding R off)
(RA): (trips and begins to cry)
(PA): "Ay, Roli! Mi hijito ¿qué pasó?"
(Oh Roli! Honey what happend?)

Likewise, we found that when children assumed a position of authority they issued commands in Spanish. Thus, when one of our research assistants went by herself to collect data from a group of children in the project mobile home, rather than as usual in the company of several other researchers, one of the older boys spontaneously assumed the role of the one responsible for keeping order among the rest. His orders in this role were issued in Spanish. It would appear that behavior in the caretaker-child relationship is patterned after that between parent and child. Children at play have also been observed to switch from Spanish to English when switching from a peer relationship to a teacher-pupil relationship.

Language alternation to mark a shift in identity relationship is, of course more common among older children than among younger children since the former have access to more identities. We found that as children become older their knowledge of English increases and so does the number of English-associated identity relationships accessible to them. Thus their use of English increases. Since in the children's culture English is less commonly used in those relationships in which females may participate (most being associated with the home) than in which men participate, the sex difference between the amounts of English and Spanish used by the children in free conversation (see Table 1) is not surprising.

The topic of a discourse does not have as large an influence upon language selection in the children studied as does who is present. The children are able to and in fact do converse about anything in their experience in both languages. However, the discussion of a few topics is more likely to occur in one language than in the other. Topics related to the family-child care, kinship, and food preparation are most often discussed in Spanish; whereas sports, school, and holidays such as Halloween and Thanksgiving are more often discussed in English. When a topic which is habitually discussed in one language happens to come up in a conversation in the other language, there is a high incidence of code-mixing and code-changing.

Discourse type also affects language use. The greatest degree of code-switching is manifested in free conversation. In general code-switching is strongly inhibited in interrogation,[1] and narration.[2]

Setting is the last situational variable clearly involved in language choice. But like the other variables it alone does not determine choice. Thus while Spanish is used with greater frequency in the home than in any other place,[1] English is also heard there--more in the case of some families, less in the case of others. Similarly, while English is the only language of instruction and response in the school outside the bilingual classrooms, interactions among Mexican-Americans in the classroom and on the playground are often in Spanish. The community park and project mobile home, the other settings in which observations were made, appeared to be neutral with respect to language choice. The interaction of the variables, participants, topic, setting, and discourse type account for the data presented in Table One, which is based on a stratified random sample consisting of ten percent of the transcribed corpus.

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[1] Interrogation in English of the pre-school children in the small city was an exception. The children often answered English questions with Spanish responses even when they were able to respond in English.

[2] Code-switching could, however, be artificially induced in narration by request. See Chapter VI.

The categories topic, participants and setting are useful analytic constructs which have enabled the author to account for a large proportion of code selection behavior. It is probable that at least the categories topic and participants also have some psychological validity for the subjects studied, since metalinguistic comments concerning these categories have been recorded. Examples are provided below:

4. (AM, 4): "¿Cómo es que hablas como nosotros?" (to Anglo bilingual elementary school teacher)

   (How come you talk like we do?)

5. (ES, 10): "In English or Spanish?"

   (J, Anglo researcher): "En español si puedes."

   (In Spanish if you can.)

   (ES): "Aw, I can't tell that in Spanish."

   (J): "Just try, OK?"

---

[1] Interestingly, two siblings whose English was rudimentary used it more freely at home than elsewhere. They were the only English speaking members of the household, and perhaps they felt less inhibited in speaking English there because there was no one to note their errors or difficulties.

Table 1

Percentages of Spanish and English Used in Various Contexts

	English	Spanish	English with Spanish Elements	Spanish with English Elements	Changes at sentence boundary	Changes within sentences
interview-Family A (only the children control any English)	9%*	90%	0%	0%	1%	0%
interview-Family B (adults and children control English)	40%	41%	0%	2%	17%	0%
bilingual classroom (Anglo teacher only)	61%	10%	0%	10%	16%	3%
bilingual classroom (Mexican-American teacher's aide)	4%	95%	0%	1%	0%	0%
regular Kindergarten	90%	7%	1%	0%	1%	1%
boys** at project mobile home (interview situation)	17%	72%	4%	3%	3%	0%
girls at project mobile home (interview situation)	2%	91%	0%	7%	0%	0%
boys at project mobile home (free conversation)	78%	22%	0%	0%	4%	0%
girls at project mobile home (free conversation)	60%	31%	2%	1%	5%	1%

**Girls and boys came to the project mobile home at different times. Our data thus lack interactions between the sexes.

*Figures may not add to 100% due to rounding.

2 Code Selection and Style

Gumperz and Hernandez-Chavez (1972) have shown that code-switching has a stylistic function for adult bilinguals. Our data suggest that style is also a very relevant parameter for analyzing the code switching of children. We have found that children's code switching may serve the following stylistic functions:

2.1 Emphasis.

Code-switching for emphasis may occur from Spanish to English or from English to Spanish. The majority of such code-switches involve commands. Sixteen of our corpus of seventy-four code-switched commands involve repetitions of commands in translation. Sentence 6 is an example:

6. (PA, 9): "Stay here Roli. Te quedas aqui!"

There are seventeen switches for commands which begin new turns of speaking:

7. (RA, 4): I go get it.
(PA, 9): Hazte, hazte pa'allá!
(Get over, get over there)

The remainder are switches or commands within a turn of speaking:

8. (CS, 7): Who is that? ¡Pégalo!
(Hit him)

Below are examples of emphatic code switches which are not commands. There are only six which seem clear cut in our entire corpus. All involve translations.

9. (TA, 8): Yo soy segundo. I'm second!

10. (RP, 9): Ya acabé, I'm done!

11. (CS, 7): I can't do it. No puedo!

2.2 Focus.

Focus is here used to refer to the bringing into prominence of a sentence, in contrast to emphasis here used to apply to the entire sentence.

One method of focusing upon a portion of the meaning of a sentence is topicalization. Code-switched topicalized subjects of the type illustrated in 12 below are perhaps used to indicate the ethicity of the individual who is being discussed. In our data all examples of code-switched topicalizations were Spanish phrases in otherwise English sentences.

12. (E, 8): "Este Ernesto, he's cheating."
(This Ernest)

Other examples of focus are:

13. (JM, 7): "Pegó right there." (He hit...)

14. (CS, 7): "Come on give me towel, la toalla.

2.3 Elaboration.

Occasionally code-switching is used when a child wishes to repeat a meassage including additional information. Examples are:

15. (R, 7): "Yo lo puedo quebrar. Yo lo también...
lo pu(edo) quebrar.
I can break this easy with my nose."
(I can break it. I can break it too...)

16. (PA, 9): "Roli you stay here. Tú quédate 'jito con
Suzy"
(Stay with Suzy honey)

2.4 Clarification.

The repetition of an utterance in translation appears to function as a means of resolving ambiguity or clarifying a potential or apparent lack of understanding.

17. (PA, 9): "¿Qué tiene?...Will you watch your cards!
¡Fíjate en las cartas!" (to boy 3, who
knew little English)
(What does he have?...(...) Watch the cards!)

18. (CS, 7): "You(r) dog."
(J, Anglo Res): "You dog? My woof?"
(CS): "You(r) dog! Tu perro!" (Your dog!)
(J): "OK. What about him?"

19. (J, Anglo Res): " Dónde fuiste?" (Where did you go?)
(RA, 3): "A school." (To school.)
(J): "Huh?"
(RA): "A (la) escuela." (To school.)

2.5 Attention Attraction or Retention.

Within a conversation a child may use a code switch as a device to attrach or retain the attention of his audience. It seems likely that such code switching serves the same function as a raised voice, address forms, gestures, physical contact or eye contact.

20. (MS, 9): "Now let me do it. Put your feets down.
Mira! (Look!) It's Leti's turn again.
Hi Leti!"

21. (MS, 9): "Yo me voy a bajar, Teresa. Look!"
(I'm getting down...)

Still other cases appear to be a means of avoiding the tedium or insistence caused by multiple repetition. This type of repetition in translation has the impact of a paraphrase, not a repetition.

22. (PA, 9): "A ver, a ver...let me see, let me see."
(Let me see, let me see...)

23. (RG, 7): "Éste es el roof. This the roof. This is the roof."
(This is the roof...)

2.6 Mode shift.

Children's discourse includes narration, commentary, soliliquy, interrogation, etc. Code-switching sometimes marks a point of transition between these modes. For example, code-switching frequently occurs when a child interrupts a story he is telling to make a comment external to the narrative.

24. (T, Researcher): "Tell me a story."
(SS, 5): "I know a story of pigs and I know a story of Wizard of Oz."
(T): "The Wizard of Oz? Tell me whichever one you like."
(SS): "OK. takes a deep breath) Así no va. Espérate. (Not that way. Wait.) Oh, Sonny and Cher, OK?"
(T): "OK."
(SS): "Sonny and Cher, it was raining and then Sonny and Cher broke his window..."

25. (TA, 8): (final sentence of story told in Spanish) ...respiran las llantas del tran, y... that's all I could think."
(...the train's tires breathe, and...)

26. (J, Anglo researcher): "¿Dónde vive María?"
(Where does María live?)
(CS, 7): "María vive en mi casa."
(Maria lives in my house.)
Really she is.

27. (EC, 8): "Lo pegó aquí. I saw it."
(He hit him here.)

Similarly, children often code switch when interrupting a conversation with a self-directed or rhetorical statement.

28. (RG, 7): "You love boys!"
(J, Researcher): (feigns crying)
(RG): "Why you cry baby. Está llorando."
(He's crying.)

29. (LS, 5): "Mira mi (hi)jito. La leche de tu mamá.
Oh, darn, now what!"
(Look, honey. Your mom's milk.)

Children also switch code when moving out of an interrogative mode as in the following example:

30. (J, Anglo researcher): "¿Ése es Tibaldo o David?"
(Is that Tibaldo or David?)

31. (ES, 12): "Éste es me Davi. I'm going to beat him up."
(This is my Davi.)

2.7 Topic Shift.

Code-switching to introduce a new topic is another linguistic device used by the children. They appear to use such a switch to emphasize the fact that they are no longer interested in what is presently being discussed and wish to proceed to a different topic. Examples are:

32. (T, Mexican-American Researcher): "Dile que es una casa sin techo."
(Tell her that it's a house without a roof)
(LS, 6): "We have a pretty, uh, Christmas tree."

33. (HS, 13): "Me duela la muela"
(My molar hurts)
(RP, 9): Remember when we eat dinners over there at my house, we drink soda.

34. (RA, 4): "¿Y dónde mis rabbits?"
(And where my rabbits)
(LS, 6): "Ahí están. Les están dando comida"
(There they are. They are giving them food)
(DH, 6): "Yo les voy dar comida al pájaro y..."
(I will give food to the bird and...)
(RA): (will) you (be) playing (checkers)?
(DH): "Yeah, she's gonna wash her hands."

2.8 Addressee Shift.

We have already discussed the fact that the characteristics of his addressee influence a child's language selection. If he switches addressees and the relevant characteristics of the new addressee are different from those of the previous addressee, a language switch is common. However, sometimes the relevant characteristics remain the same with an addressee switch yet a language switch takes place. It seems likely that such a language switch is sometimes used to help clarify the fact that a new person is being addressed, thereby avoiding the necessity of a later message such as "I'm not talking to you; I'm talking to Maria." The following instance of code-switching appears to have occurred for that reason:

35. (HS, 13): "Pregúntale a Patty. Pregúntale. (To Rosa)
(Ask Patty. Ask her)
Wasn't I at the house? (to Patty)

We also find code-switching associated with a change in addressee when there is an alternation between messages in the second person and messages in the third person:

36. (CS, 6): "Mira, Rosa está sacando la lengua. (to Anglo res.)
(Look, Rosa is sticking out her tongue)
You like Jim; you like Jim. (to Rosa)

37. (RG, 7): Why you cry baby? (to Anglo researcher)
Ésta llorando. (to audience of researchers and Mexican-American girls)
(He is crying)

Our data do not indicate a uniform developmental sequence in the use of code-switching as a stylistic device. Some older children do not code-switch at all for stylistic reasons in our data, while some younger children do so frequently. Nevertheless, there appear to be some patterns. There are only a few examples of emphatic code-switching by young children. Perhaps, their paucity relates to the fact that most emphatic code-switches involve commands. In our data there are few examples of commands by young children as most of their recorded interactions were with children older than they, where commands by the younger children were defined as inappropriate. There are no examples of focal code-switching by children under seven. Neither are there examples of elaborative code-switching by children under seven. The latter fact seems strange as sentence expansion or elaboration within a language is a common strategy of young children (vide e.g., Clark, 1974). One might expect that such switching might at least occur going from English into Spanish, the language the young children generally know best. Switching to clarify a meaning by translation appears to be learned quite young. We have many examples from three year olds. Likewise, switching to attract or retain attention is learned early. The youngest child for whom we have clear examples of code-switching to mark mode shift is five. The switch marked a shift from the narrative mode to commentary. All our examples of code-switching to mark topic and addressee shift came from children at least six years old. Disregarding age, the commonest types of stylistic code-switching were attention attraction and retention followed by emphatic code-switching. The others were much less common.

3 Conclusion.

In designing our research on the social functions of code switching we proposed the following sequence of development:

1a. Knowledge of the rules governing situational code-switching.

1b. Application of the rules governing situational code-switching.

2a. Knowledge of the rules governing metaphorical codeswitching.

2b. Application of the rules governing metaphorical codeswitching.

3a. Knowledge of marked code choice, i.e., deliberate violation of the norms governing codeswitching for affective purposes.

3b. Application of marked code choice.

Upon analyzing the data collected we found: (1) it was not possible to distinguish between knowledge of the functional rules governing code-switching and their application because of the limitations on the children's metalinguistic awareness, (2) none of the children made use of marked code choice, (3) the distinction between situational and metaphorical codeswitching did not handle our data well. Thus, a distinction between situational and stylistic code switching was substituted. As would be expected we have found the full range of functional codeswitching only among the older children (eight and above).

Also as was hypothesized at the beginning of the study we found a tremendous range in the social use of codeswitching among children of the same age. Some fully bilingual children as old as eight did not codeswitch at all within conversations while others did so frequently and very effectively. Code-switching like other rhetorical devices is a powerful linguistic tool. Like other rhetorical devices it does not appear to be mastered by everyone.

Chapter VI

STYLISTIC CODE-SWITCHING IN NARRATIVES

1 Background

In the course of our research we have found that many of the children enjoy taking the role of narrator. Their spontaneous narratives range from descriptions of past events, through scenarios of recently seen movies or television programs and retellings of traditional stories, to the creation of new stories involving well-known or fanciful characters. The data to be discussed here include both these spontaneous narratives and also those elicited in response to a request for stories told in a combination of Spanish and English.

Our discussions of these narratives and the observations set forth in Chapter V should aid in providing the reader with the background necessary for an understanding of the basic problems involved in describing code-switching linguistically. As we have implied before, code-switching is never an obligatory feature of language use, and its occurrence is occasioned by many factors. By taking a closer look at the stylistic use of code-switching in narratives, it is hoped that a clear picture of our reasons for suggesting particular syntactic paradigms later will be drawn.

2 First Narrative

Let us first consider the following narrative elicited from TA, a nine year-old boy. Translations of Spanish passages are given by line number at the end of this chapter.

Woody Woodpecker was walking...down the road. He met a squirrel. The squirrel le gritó. Then Woody Woodpecker pecked on the tree, and the squirrel dijo, "¿Que estás haciendo?" And Woody Woodpecker answers, "Nothing." And then Woody Woodpecker said, "¿Qué horas son?"

"Eight o'clock. What d'ya wanna know?" [Sq]

"Tengo que ir a una fiesta." [WW]

"OK. I'll see ya later." He says, "Where ya goin' now?" [Sq]

"To the mailbox." [WW]

"What for?" [Sq]

"Entrego una carta." [WW]

"Pa' qué?" [Sq]

"Pa'cer...pa' dar una carta." [WW]

"¿A qué horas?" [Sq]

"A las diez, que ya son las diez. Mamma mía! Me llevas?" [WW]

"OK. Let's go in my car." Brrrm! [Sq]

"OK. What time is it now?" [WW]

"Ten-thirty, ya've mucho tiempo. OK, get off." [Sq]

"What for?" [WW]

"You said you were gonna go to the mail." [Sq]

"Ah, I thought I forget it." [WW]

"I wasted gas for nothing!" [Sq]

"¿Qué tiene? (aside to audience) Take me to the party." [WW]

"OK. Vamos!" [Sq]

Ah, so they went to the party, and they got to the party on time. It was about eleven o'clock, and they got there.

"¿No vas a ir tú a la fiesta?" Woody Woodpecker said to the squirrel. The squirrel said, "Nah, forget it. I didn't meet my girl friend tonight." Woody Woodpecker said "Bueno, como quiera, yo puedo ir sólo." Then the squirrel says, "Yo también, pero no quiero."

Then the squirrel left. Woody Woodpecker was scared to death. He was nervous 'cause he didn't have somebody with him, so he went to call his grandmother. Grandmother wasn't there. He called all his relatives in the world, till he found out that all his uncles and aunts were dead. Then he went inside and found out that the party was over. He had too much time callin' everybody. So he went home. He called his grandmother to tell....to tell her qué? (self directed query by narrator) que lle...que, que no fue a la fiesta, ah,.... de su hermana, y...y.... the grandmother said, "¿Por qué no fuistes?"

"Didn't have time. I called all my aunts and uncles see if they can come with me."

And the grandmother said, "Well you wasted too much time sonny."

> "OK! I'm gonna go now," and said, "Goodbye!" And ... he hung up the phone, and he called the taxi, and the taxi came to pick him up. And he says, "¿Pa'ónde vas?"
>
> "Oh, Main Street. Take forty-four four five forty-four four five forty-four four five..." And the taxi driver said, "How many times you gonna repeat it?"
>
> "Sixteen times, so you know that." He (taxi driver) said, "Man, you must have a big sign."
>
> They got there and ...ahm, Woody Woodpecker said, "¡Hijole! Ya era una dia muy noche." And then he said, "Wow! This is a horrible night. I better go to sleep or not I'm gonna get up tomorrow. I have to get up and go get some water for the birds." He said, "Well, anyway I have to get some for me too."
>
> He went to sleep and woke up the next morning, and he saw this girl that was a woodpecker, and her name was something he couldn't find out, so he keep askin' her every minute, but she said she wouldn't tell her [him] till they got to the party, and...they had a party again.
>
> Y luego le dijo que se vaya pa' la casa, y allí le llamaron al telephone, porque le quiere que era su nombre. Y luego dijo que su nombre era "Nada". Y le dijo, "Nada, ¿eso es tu nombre?" And he [she] said, "Yeah, that's my name."
>
> Then they got together and got married, and they lived happily ever after.

In this story the introduction and closing are in English. Indeed, the latter "and they lived happily ever after" is formulaic, a traditional ending for many stories children hear. Most of the description of action is likewise in English. Spanish however, has a definite functional role. In line 43 it marks a discontinuity in the story - the intrusion of the author - narrator with a self-directed query in which he questions himself aloud as to how the narrative should proceed. An alternation between Spanish and English takes place as different characters in the story are focussed on. One has the distinct impression that it is not so much the ethnicity of these various characters that is being pointed out, but rather that the choice of Spanish for one and English for another is a means of keeping characters separate. The use of a code-switch for quotations is similar to the use of an affected accent in the same language. Of course, it is possible that this child sees either the squirrel or Woody Woodpecker as somehow associated with Anglo and Mexican values as he ascribes them their respective codes rather consistently. One might explain inconsistencies as in lines 31-35 as simply lack of concentration, or the squirrel may speak English and then Spanish because he happens to be bilingual in the child's imagination. The same thing occurs when the grandmother speaks in lines 46 and 49. The immediately preceding indirect question in line 43 is self-directed, and the impression is given that the child is aware in advance of the answer that he must speak to the grandmother in Spanish, which is what he does indirectly as narrator in lines 44 and 45. Even though the grandmother speaks to Woody Woodpecker in Spanish in line 46, his response is in English. Grandmother answers in lines 49-50 in English.

The question arises whether these characters were behaving according to the rules governing social functions of code-switching as outlined in Chapter V. We do not know, but it is possible that this child moves in and out of a story telling mode in which such a reality may in fact be at work in his mind. Note, however, that Woody Woodpecker repeats essentially the same exclamation in translation in lines 60 and 61. This is very reminiscent of the code-switching for emphasis we have noted among the children.

The preponderance of Spanish in the above narrative occurs in dialogues. Both direct and indirect quotations occur in Spanish. It is interesting to note that the dialogue shifts back and forth between Spanish and English. A question in Spanish may be answered in English, or vice-versa. A conversation may proceed for a while in one language then switch to the other and perhaps switch back again. This language alternation is a reflection of what we have observed frequently in the interactions between the children and the Anglo teacher of the bilingual classes, the project researchers and, to a lesser degree, their own parents. We have also observed conversations among children which switched back and forth at the level of the turn of speech. Clearly, the children studied do not perceive as aberrant a conversation which alternates between two languages. These appears to be no strong conversational rule among the children requiring them to respect the language choice of a bilingual interlocutor.

It is interesting that there is only one intrasentential code-switch in the speeech of the characters. In line 20, the squirrel uses "mucho tiempo" in a sentence with an English subject and verb. Although it will become clear later why it is important to note that "mucho tiempo" may be a unit in a way that "mucho arroz", for example, is not, suffice it to say simply that something has suppressed this child's ability to code-switch extensively at the intrasentential level. The narrative portions contain several code-switches of this type. There are at least two factors to consider in attempting to explain the quoted characters' lack of intrasentential code-switches. The first is complexity. Could it just be too complex a task to code-switch between turns of speaking, trying to keep characters sorted out, and to mix codes within the sentence as well? Though it is very difficult to prove, we believe not. The second factor is style. This entails many considerations, such as the purpose and need for code-switching. Do the characters in the story have a need to code-switch? Can they communicate without intrasentential code-switches? Apparently they can, and they do. Bear in mind that code-switching to find the correct work in a particular situation is but one of many reasons for bilingual code alternations. In our data, it is a very poorly represented cause, despite the fact that many adults claim this to be the main reason for their use of English in Spanish discourse. Rather than accept this as an accurate description of their behavior, we choose to view the fact of the code-switch as contributing to the meaning which is felt not to be available in the language of the utterance.

The need we have alluded to is a need to express something beyond just the meaning of lexical items. We view the code-switch as meaningful in and of itself, and we feel therefore that a very tempting explanation of the lack of intrasentential code-switching may lie in the characters' lack of necessity for such expression, due perhaps to the degree of depth of involvement of the part of the narrator. In other words, the story telling mode, for this child, is not a real enough situation to bring about the need for code-switching in his characters for the purpose of communicating. They are able to get along without it. Though this child in truly an excellent narrator for his age, it is probable that his possibly conscious general adherence to a monolingual sentence format belies this apparent expertise in character protrayal. We are saying essentially that if these characters were as bilingual as the alternating passages would seem to indicate, then a more accurate representation of their style would probably contain more code-switching at the sentence internal level.

Mode-shift is very common in narratives, and a code-switch is often used to mark this device. A switch from "simple narration" to "imitation" that is from indirect discourse to direct discourse or quotation is one type of mode shift, frequently associated with code-switching in the children's narratives. Another type of mode shift found associated with a code-switch can be seen in line 25. Here with the words "¿Qué tiene?" we see the direct intrusion of the editorially omniscient author/narrator commenting on the behavior of his characters. "What's with him" the author/narrator rhetorically asks his hearers indicating that he personally feels that the squirrel's comment in line 24 was unwarranted. If our analysis of these lines is correct, then one must consider this use of a code-switch to be a rather sophisticated stylistic device in a nine year-old child.

Another clever use of a Spanish element in an English context is the pun which is made on nada (nothing) in line 72. Cross-linguistic word play of this type is not commonplace, and in fact bilingual puns were not really observed in any of the children consistently except for this one. This talent seemed to be one which TA possessed, rather than one which was basically lacking in others. Indeed on two previous occasions at least, TA had made puns on the word nada.

76a. [RG]: Tú, ¿qué sabes?
TA: Nada.
[RG] You're a party pooper!
TA: I told you it was "nada"!
76b. [RG] ¿Con qué se hace eso?
TA: Con "nada".

Consequently, it is likely that this pun was not generated spontaneously in the course of the development of the narrative in question. Rather, it would seem to be a part of the narrator's set stock in forms of verbal play. It may be that puns, even those which can be translated easily, are used only in the language in which they were originally learned. Perhaps the children can appreciate puns and can use them appropriately but generally can neither generate nor translate them easily.

There are many more points which could be discussed regarding the first narrative, however our purpose, as we have indicated, is not to analyze fully all of the narratives we present in this chapter, but rather to provide the reader with the opportunity to develop a feel for our views and for the variety of data to be presented in later chapters.

3 Second Narrative

The second narrative, also elicited from TA is given below:

> Una vez, había un señor que llamaba James. James would
> always go into the woods and look out for animals. One day,
> a spider bit him, y dijo, "Ya me duele el pie!"
> 80 And he turned out...he got webby. He got sticky. Then
> he said, "¡Me 'toy haciendo un hombre de una araña! ¡Hi-
> jole! ¡Mamma mía! ¡Ooo!" And then the man, James, got
> excited, and he said, "My name should be Spiderman, and
> every time a crime committed, we'd go to it."
> 85 One day, this man was walking across the street, y
> dijo, le dijo otro hombre, "OK. ¿Te vas a ir pa'alla....
> pa'el sur?" And he said, "'Tá bueno," and he said, "vamos
> a robar una tienda." And they went to a store and they
> robbed, and Spiderman was after 'em. Dijo, y lo, and
> 90 then they said, "There goes Spiderman!" Dice, "Los 'tá
> siguiendo." Dice, "Ya los va...ya los está siguiendo muy
> cerquitas." "Vámonos!" And they went 'n they got away in
> the get-away car. Spiderman was in back. He put a spider
> web in front of the two and between two buildings. They
> 95 caught 'em. And then Spiderman said, "Bueno, ya lost pescaba-
> rás. We need a prison." Then they got there and when they got
> there they had this special knife the could cut anything and
> they got out, and they were alert on the wanted signs,
> and everything, y luego le dijo la policía, "Spiderman, tú
> 100 vas a ir a pescarlos."
> "OK! I'll go catch 'em."
> And then we went to catch 'em, and he spun his web and
> everything, till he caught 'em, and then they put him in
> jail, and that was the end.

This story opens with a formuaic Spanish introduction, and it ends with an English closing. As in the first narrative, the description of events takes place in English, while both Spanish and English are used in dialogue and the introduction to dialogue. Interestingly, in this narrative English introductions occur before both Spanish (lines 80-81; 87; 87-88; 95) and English (lines 83; 90) quotations. However, Spanish introductions are found only to quotations in Spanish (lines 79; 86; 99). In line 89 there is a near exception to this, but the Spanish introduction is changed to English in the following line. It would appear that this story is essentially an

English story despite its Spanish opening. The use of Spanish for some quotations may be meant to imply that the characters actually used Spanish in speaking at that point in the conversation, or, as we have said previously, it may be used to indicate a switch in speaker. That TA is not consistent in his code choices may be a reflection of his attitudes at different points with respect to the character of Spiderman, for instance. Even though the character's name is "James", all of his lines are in Spanish until he changes into "Spiderman" in line 83.

In this narrative, Spiderman twice switches between English and Spanish within one turn of speech (lines 79-84; 95-96). In both cases it appears that the more affect laden portion of the speech turn is in Spanish and the less affect laden portion in English. In lines 79-84, expressions of pain and startled discovery are in Spanish, whereas the more neutral statement about a new name occurs in English. Likewise in lines 95-96 a statement announcing success in the capture of the hunted criminals is in Spanish, while the matter of their disposition in handled in English. The only other instance in which Spiderman speaks, in line 101, supports the notion that his speech alternates between Spanish and English according to affect. Line 101 appears to be treated by the narrator as a matter-of-fact acceptance of an order, since neither its intonation nor working conveys any feeling of emphasis, or excitement etc. The use within a narrative of alternation between Spanish and English to mark strong affect would seem both natural and appropriate as such an alternation has been noted in the conversations of the narrator and his peers.

Lines 89-92 might be considered to be an example of alternation in language motivated by some factor other than affect. We feel that these involve shifts in speakers. "¡Vámonos!" is clearly uttered by the robbers, but "There goes Spiderman!" appears to have been uttered by bystanders in the story. It is reminiscent of phrases such as "It's a bird! It's a plane! etc." Such exclamations by "the man on the street" are stock portions of many narratives concerning comic-book heroes with special powers. The phrases "Los 'tá siguiendo...ya los va...ya los esta siguiendo," appear to be uttered by one bystander as opposed to a large group as a whole, for they are introduced by a singular verb, "dijo" (he said), rather than the plural one dijeron. Again, it does not seem likely that these lines were said by the robbers, as the pronominal reference in the quotation is to "los" (them) rather than "nos" (us). We say here "not likely", because the children have been known to make mistakes with pronouns in Spanish and in English.

The total absence of intrasentential code-switches in the dialogue is consistent with our finding them rare in the first narrative. However, one point is worth mentioning where the use of proper names is concerned. Note that in line 77, the first line of the story, "James", a proper name given its standard English pronunciation, occurs in a Spanish sentence. Similarly, there is no phonological adaptation of "Spiderman" in line 99, despite the fact that it occurs in a Spanish sentence, nor is this name translated to Spanish as "Hombre-Araña" or the like. We have found that where Anglo names are concerned, phonological adaptation to Spanish is very rare, and it is likely that where it is done it is the result of the children's having heard the name pronounced by monolingual adults. The names we have heard adapted for Spanish are all well-known names among the parents. On the other hand, Spanish names are commonly adapted or left alone in English discourse. At times it seems that the vocative use of proper names causes English phonological adaptation among the children, while the use of Spanish proper names in reference to the person in English discourse among bilinguals seems to be more divided were pronunciation is concerned. Yet, there are counterexamples even to this generalization which is quite broad, and if there is a pattern to the phonological adaptation of names that is a reliable predictor of the usage one observes, then we have not been able to discover it.

Insofar as a translation of a name such as "Spiderman" is concerned, these children just would not do it on their own. We had several occasions to suspect, in fact, that acceptance of translated names was not easy for the children. TA was heard trying to convince his playmates that he had learned how to say "Tony the Tiger" in Spanish from an announcement on television. He had heard the announcer say "Tigre Tonio", but the children objected saying that it should be "Tonio el Tigre", a literal translation, or by insisting that his name is "Tony" or "Tony Tiger" and not "Tigre Tonio".

4 Third Narrative

Our third narrative was elicited from ES, a 12 year-old boy:

> There was this scientist who...uh, was a doctor. Well, he was planning to be a doctor, and this kid named, le llamó Frankenstein. Y dij...and he said, "That ain't my name. That isn't my name. It's Frinkinsteen." And the kid said, "I thought it was Frankenstein." He said, "No! It's Frinkinsteen." Y luego, lost otros trajeron un hombre, and he kicked 'em in the mid-section stomach, and be bowed and then, y luego, le puso un fierro en la cabeza, and then he hit him on the stomach, didn't hurt him...then, y luego se lo quitó. Then he was shakin'. Then, luego se fue para Pennsylvania, y 'taba un hombre experándolo, 'ta viniendo. He came and name was Igor, and he was so funny. He went, "Hello!" Y luego lo llevó pa' la casa, y estaba esta muchacha bonita. And there was big knockers on the door about so big (gestures) and he said, "Man! What big knockers!" And the girl said, "I don't mind! (audience laughter) Thank you! (narrator to audience) She meant...(gestures)
>
> And then, y luego...se lo llevó, y esta señora se llamaba.. yo no sé como pero--it was a funny name (aside to audience). And, y luego cuando, when they said her name, the horses all went "(horse imitation)", and they they killed this guy. Y luego, he found his grandfather's books,

and he made a young Frankenstein, and he taught him how to
walk and then he got mad. He turned on fire. He started
getting mad and he started chok...le ahor...lo estaba
130 ahorcando Frankenstein. Y luego lo puso, luego...then...
the lady turned him loose and he got mad, and he was trying,
he...this blind man--man you're gonna see this creep--
(aside to audience) he said he was gonna pour some soup on his
plate, on his bowl, I mean, and instead of the bowl put it on
135 him, on his legs. And he went, "Ahhh!" Then he broke his
wine bottle. Y luego, he ...le quemó el dedo gordo...el
gordo. Y, and then, he left. The...he taught him how
to dance, talk, and uhm, then he got so mad...nervous,
and he got loose, and the whole people locked him up and
140 luego le metió en un cuarto y el señor dijo, "I don't care.
I don't care what you hear or what you..what I'm saying,
don't open this door! Then when he went in he said, "Get
me the hell out of here! Don't listen to what I said!
They didn't do what he said, and then he said, "Oh my
145 poor baby, what have they done to you?" He said, "Nobody
likes you. Everybody has been insulting you."
And then he starts crying, and then , that's when he starts
talking to all that dance. And then he runs away, and
then he gets this girl....Frankenstein took her and started
150 kissing her. And then she went, "I think I'm in love with
this monster." Y luego se vino pa'atrás o algo, y luego el
profesor...put his mind to the monster's mind, and then
the monster's mind was on the doctor's, and the whole thing
was gonna kill him.
155 [JW]: Iba a matarlo.
    Iba a matarlo.Thank you. (to [JW]) Y.. and then...
then Frankenstein said, "Put that man down." He said y
luego el hombre dijo, " Qué? Este, el monstruo habló?" Y
luego el otro dice, "No, he's just not talking." Luego
160 dice, "Pon ese hombre pa'abajo!" and he did, and then he
got up, y entonces se conocieron. Y luego dijo, "Vamos
pa' la muchacha." Y luego se casaron ésta y éste. Y luego
la señora fue, 'n went (gestures), and then, y luego fue
asina (gestures). Y luego, ya se acabó. Thank you! Thank
165 you! Thank you! Thank you!

The third narrative opens in English and closes with a regular Spanish formula. However, in this case, unlike the previous two, there is a distinction between the close of the narrative, which is accomplished by the use of the Spanish phrase, "Ya se acabó." and the ending of the performance, which is marked by "Thank you! Thank you! Thank you! Thank you!" (Lines 164-165). The latter emphasizes the role of the author/narrator as performer whose function is to amuse his audience. The intrusion of the author/narrator as performer, as opposed to clarifier, for example, is characteristic of the style of the second author/narrator though not of the first. It is also seen in line 120 in which the author/narrator acknowledges the fact that his pun has been appreciated, and in line 156 in which he sarcastically acknowledges an unsolicited prompt from a member of the audience. It is usual for these changes in mode of discourse to be marked by a change in code, especially to English.

In each case in which the author/narrator steps away from the story and focusses on his own performance, English is used despite the fact that in two of the three cases the digressions follow Spanish utterances. However, in each case the aside consisted merely of "thank you". Since set expressions which are part of speech etiquette usually occur in English, even in the Spanish conversations of the children studied, it would be interesting to know whether the digressions would have still been in English, if they had been more elaborate than just set expressions. We suspect that the answer is "yes", since this child showed a marked preference for the use of English in conversations with others who understood it, and the author/narrator's remarks discussed here are part of a one-sided conversation with his audience rather than part of the narrative. The change in mode is analogous to that felt when an actor on television or film turns and speaks directly to the camera.

Line 132, "man you're gonna see this creep", though not a reference to the narrator's performance, constitutes another direct address to the audience. It is so marked by intonation and stylistic change. Note the use of "man", for example. This direct address too is in English. The author/narrator's presence is explicitly marked in two other segments of the story as well. In line 134, there is a self-correction containing the phrase "I mean", and in line 123, "Yo no sé como pero--it was a funny name", the author/narrator tells us he does not know the name of one of the characters in the story. The general tone of the first part, "yo no sé como pero", indicated that ES has not actually left the story telling mode, despite the fact that he is using the first person pronoun. This is unusual, but one has the impression that following "pero" (but) he had intended to continue with narrative and instead interrupted himself with an additional clarification "it was a funny name" which unambiguously indicated that he was making an editorial comment. It is important to note here that the Spanish and English parts of this seemingly conjoined sentence structure are in fact not felt to be such upon listening. That is, the interruption of the Spanish after "pero" causes this thought to be unfinished, and "it was a funny name" seems to be a parenthetical remark in a way that "yo no sé como" was not.

This story, like the first one, contains a pun. In line 119, the pun on "knockers" occurs in an English sentence preceded by a sentence in which "knockers" are first mentioned and which marks a change in code from the narrative portion in Spanish in line 117. Just as in the first story, the desire to make a pun occasions a code-switch to the language of the pun. The same phenomenon has been noticed by Haugen (1953) and others. We have observed adults, furthermore, perceiving a joke is at hand when a bilingual friend began at a certain point in the conversation speaking Spanish. There appeared to be no other clue that he was beginning a joke than the unexpected code-switch, yet smiles among his listeners were clearly a mark of anticipation of a tall story. The lead-in to the pun by ES in this case that occurs in line 118 is sufficiently long in English that the listener is given ample time to for a language set which will facilitate the recognition of the multiple meaning of the crucial term.

We have up to this point discussed only code-shifts between two languages. This story also seems to contain stylistic code-shifts within English. Line 107 contains a quotation which begins as "That ain't my name", but that sentence is immediately followed by "That isn't my name". Since we have heard the narrator use "ain't" on many occasions in conversation, we conclude that the correction to "isn't" is motivated by either a feeling that the form "ain't" is not appropriate to story telling, or a feeling that "ain't" is inappropriate in the speech of a doctor. Since the speech of a different character which is reported in line 119 is informal, we suspect that the correction in line 108 was occasioned by the fact that this line contains a quotation from a doctor. What is for the narrator a formal style is also maintained throughout the English descriptive narration. Except in quotations, formality is broken only in an aside to the audience in line 132.

Note that just as in the two previous narratives the character quotations contain no intrasentential code-switches, while the narration portion does. The intrasentential code-switches which do occur are interesting for several reasons. In line 106, ES appears to have used "named" by mistake for "called". This mistake is corrected not by using "called", but instead by using "le llamo". This is strong evidence that an identification may have been made between the words "name" and "call" by way of the Spanish verb "llamar" which is used in Spanish for either meaning. Now, the important feature of this switch to Spanish is not so much whether he meant "named him" or "called him", thought it seems clear from the context that the latter was meant, but the fact that the pronoun object "le" (him) occurs in Spanish in the proper position before the verb. One would *not* expect that a correction of the verb "named" would produce a sentence such as "*This kid named... llamó *him* Frankenstein." On the other hand, one might obviously expect a replacement of "named" by "called" to cause no syntactic complication: "This kid named...called him Frankenstein." It should be remarked here that the name "Frankenstein" received English phonology throughout the narrative.

We have seen here that even in a correction which might appear to be uninteresting insofar as syntactic regularity is concerned, the possibility of a constraint upon what can and what cannot be switched intrasententially emerges.

The use of a code-switch between conjoined sentences is quite common as in line 110. In fact, it is difficult at times to maintain that a conjunct is actually "a part of" the preceding material and a constituent of a larger sentence, as in lines 117-118 and so forth. The children make extensive use of "and then" and "y luego", and often it is difficult to determine where one would say that the sentence stops. Nonetheless, it is interesting to observe that where "y" or "luego" is used following a Spanish passage, and succeeding material is to be in English, it seems that ES perceives a sort of error and goes back to correct this error by changing first to "and", "then" or "and then" before continuing in English. (cf. lines 137, 156). The converse of this phenomenon occurs many times in the present narrative. That is, where "and" or "then" occurs, it is corrected to "y", "luego" or "y luego" just in case what follows is in Spanish. (cf. lines 113, 114, 122 and 124, etc.) To be sure, there are exceptions such as in line 126 "Y luego, he found....", or even "....and luego le metio..." in line 139, but the fact that so many corrections were made by ES is an indication that something was felt to be wrong in many instances of opposite language conjunction and conjunct.

In the 60 lines of ES's story there are twenty false starts, sixteen of which involve language switches. Ten are switches from English to Spanish and six from Spanish to English. In TA's two stories there were six false starts in 104 lines, only one of which involved a language switch. In fact, TA used the Spanish "y" in line 45 with a following English sentence, but a case could be made claiming that he was just trying to think of what came next, and did not actually connect the two sentences: "to tell her que? que lle...que...que no fue a la fiesta, ah...de su hermana y...y... The grandmother said..." Both TA and ES have a tendancy to end sentences habitually with "and then" or "y" choosing the language which they have been speaking in for the conjunction. Then when they plan to change languages, a change in conjunction seems to accompany this shift in many cases.

Now, Pfaff has observed that in at least one of her three types of observed code-switching, "Conjunctions introducing clause switches may occur in either language, not necessarily in the same language as the clause they introduce." (Pfaff, 1975: 5). Yet this is not to say that such occurrence is without significance. We believe that the usual case is for the conjunction to be in the language of the following clause, and the corrections by ES of his own violations of this principle were done in order to avoid a meaning which would have been conveyed by a failure to do so. TA in line 45, as we noted above, did not correct his use of "y...y..." follwed by an English clause. We feel that this may be due to the fact that he did not want a conjunciton of the two clauses after all. We will investigate this problem in depth in a later chapter using our own testing results and some of Lance's (1969) code-switching data. We wish only to make the point at this time that we recognize that the conjunction may occur in either language, but we feel there may be a reason for the use of a code-switch following a conjunction which involves a relationship between the two conjuncts at a very deep level of meaning.

In passing, we might mention that "loanshifts", as Diebold (1956: 52) among others terms them, are not plentiful in the children's discourse. One example in this narrative of a loanshift is the use of the verb "ir" (go) in Spanish as it is used in English to introduce a description of an action, verbal or otherwise. In line 164, "y luego fue asina..." is followed by a gesture, and would be expressed in English as "and then she went like that".

Before we proceed to a discussion of code-switching in spontaneous narratives, let us note one important aspect which seems to be common to all three of the above stories. Considered syntactically, none of them may be said to be characterized by random choice of codes. Nearly all code-switches involve what could be termed an entire sentence. Moreover, those few that are intrasentential switches, for example "The squirrel le gritó.", (line 2), "Ya've mucho tiempo", (line 20), "this kid...le llamó" (line 106), are generally entire constituents. We do not find, for instance, only the finite verb occurring in the opposite language in these data, nor does a code-switched adjective alone occur and so forth. In fact, the most popular type of code switch, the noun, is rare,"le llamaron al telephone" (line 71), and its status is suspect, since we detected a slight adaptation to Spanish phonology and feel that perhaps the only part which is English is the stress and absence of final /-o/. This is an unusual occurrence.

Now, we must not make too much of this sort of observation, yet having dealt extensively with the same children who did these and other elicited dialogues, we are left with a distinct impression that something was very different about their code-switching behavior when they were placed in a clear role of narrator. What is not clear is whether there are levels of code-switching that are syntactically characterizable, as Pfaff (1975) appears to be suggesting, which occur as features of different styles. That is, is what we have observed the maximum amount of switching allowable for these children when constrained by the narrative mode? Are the types of grammatical structures switched limited by the style? Perhaps there is a hierarchy of levels at which switching may occur, and the lower level switches are a signal of a more informal style, while full sentence switching is more formal, and switching at the turn of speech is still more so. These are questions for which we have no solid answers, only hunches.

5 Spontaneous Narratives

The first thing we notice in spontaneous narratives is that there is much less code-switching than in the stories cited above in which we requested the children to mix the languages as much as they cared to, thus calling their attention to code-switching purposely. Stories in English contain almost none. We have transcribed several stories of comparable length to the three above in which there was no Spanish at all. Another narrative of over 2500 words contained only three Spanish words. Slightly more English occurs in Spanish narratives. In one story of approximately 400 words, nine are in English, while in yet another of 1000 words, forty-five are in English. The fact that more English occurs in Spanish narratives than vice-versa is in accord with what we observed in other modes of speech--conversation, instruction, etc. Yet the amount of English in Spanish conversation and modes other than narration greatly outweighs its representation in children's telling of stories.

If we look at the switches which do occur, we find that they involve primarily nouns (e.g., gas, movie-star, spider webs, babies, bones, etc. in Spanish narratives). However, ES seemed not to be comfortable with certain of these English nouns in a Spanish context and was heard to correct himself on several occasions: "eran su bones...sus huesos"; "sus babies...sus bebitos". One explanation might be that he in fact could not find the word and then finally did, as no correction followed the use of the term movie-star which seems to have been incorporated into the local Spanish lexicon, since the children do not appear to know a Spanish equivalent. However, the pronunciation has not been affected when used in Spanish.

Occasionally, switches involving other syntactic units also seem to be due to an inability, temporary or otherwise, to express a particular idea in the language of the narrative. Thus, we find such sequences as "se ponen fake" or "one bigger than the other" embedded in a predominantly Spanish narrative.

Code-switching to mark quotations is extremely common in the more eloquent children. As Lance (1969) has observed, quotations may appear in the language in which they originally occurred among adults. The would seem to occur among the children as well. The example "....y dijo que, 'I'm sorry'" occurred in a long Spanish story which was almost entirely in a descriptive mode. The following was said by the same girl in a conversation among her friends:

166 RP: Then Michael told Don Pablo, "Sabes quién es la novia de
Hector? Y luego dijo a Hector que era yo. And then I
go, "Oh! I hap...so happy!"

Shifts out of the story, as we have seen before, may also be marked by code-switching:

169 DA: Y le dijo, "Yo no sé nada." Luego no va a saber nada.
"No sé." Let me say that again. Ah...yo no sé nada...
yo no sé nunca. Luego dijo que no iba a saber todo el
día y con no sé, con no sé, que no sé. That's the end.

173 TA: Cayó el reloj que le regaló ella, y luego (someone calls)
OK, I'll be finished in a minute. Y luego el otro....

These examples represent comments by the narrator on his performance. The first (line 170) marks a sort of difficulty in the performance, and the second (line 174) contains information about the duration of the performance for the audience who has heard that food is ready in another room. Now, a different type of aside and one which also involves a code-switch is found in the following: "El es que, you know." This contains an appeal to the audience to fill in information.

Another cause for code-switching is the fact that by and large titles are not translated. Thus we find such sequences as, "Then Michael told Don Pablo..." and "Este hombre que se llamaba Doctor Death se caso con una muchacha." It is certainly possible that for some children, titles may not be actual changes in code, but an unadapted borrowing from Spanish which is used freely in English almost as a proper name is used.

6 Conclusion

In summary, the following observations may be made. Code-switching may occur as part of narrative style among these children. However, it occurs much less frequently in spontaneous narratives than in narratives where children have been specifically requested to code-switch. Indeed, code-switching appears to be significantly less frequent in spontaneous narratives than in conversations. Perhaps the children generally use different speech styles for conversation and narration which are partially defined by the strictures on code-switching. In the less formal conversational style, code-switching occurs relatively freely, while in the more formal narrative style it is allowed only for specific purposes. These purposes include: marking quotations, editorial comments on the characters, and comments on the performance; bounding the narrative (i.e. openings and closings); introducing and making puns; preserving titles in their original form; and providing expression to an idea which may not be expressable by the narrator in the language of narration. This problem of finding the right word seems more prevalent when the children speak Spanish than when they speak English and is perhaps some measure of language dominance.

Finally, let us note that we believe that there are also syntactic restrictions upon code-switching. In spontaneous narratives switching occurs primarily at the level of the noun or phrases which behave as nouns. In the elicited narratives, it took place primarily at the sentence level, or between major constituents such as subject NP and the verb phrase. In neither case did we find a surfeit of types of syntactic patterns, indicating that code-switching is very likely not syntactically random.

TRANSLATIONS OF SPANISH DATA

LINE	First Narrative
02	The squirrel shouted at him.
03-04	...and the squirrel said, "What are you doing?"
05	...then Woody Woodpecker said, "What time is it?"
07	I have to go to a party.
12	I'm delivering a letter.
13	What for?
14	To make...to give a letter.
15	At what time?
16-17	At ten o'clock; it's already ten. Oh boy! Will you take me?
20	...ya've a lot of time.
25	What's wrong with him?
27	OK. Let's go.
31	"Aren't you going to the party?"
34	"Fine, as you wish, I can go alone."
35	...says, "Me too, but I don't want to."
43	...to tell her what?
44-45	...that [he takes]....that, he didn't go to his sister's party, and....
46	...said, "Why didn't you go?"
53	And he says, "Where are you going?"
60	"Wow! It was a really dark day."
70-71	And later she told him to go home, and there they called her on the phone, because he wants her was [sic] her name.
72-73	And then she said her name was "Nothing". And he said, "Nothing, that's your name?"
76a	[RG]: You, what do you know?
76b	[RG]: What do you make that with?
	TA: With "nothing".

LINE	Second Narrative
77	Once upon a time, there was a man whose name was James.
79	...and he said, "My foot hurts!"
81	...he said, "I'm turning from a man into a spider!"
81-82	"Wow! Oh boy! Oooh!"
85-87	...across the street, and he said, another man said to him, "OK. are you going to go there...to the South?"
87-88	And he said, "Fine," and he said, "Let's rob a store."
89	He said, and [it], and ....
90-92	He says, "He's following them" He says, "Now he's going [them].... now he's following them real close."
95	...Spiderman said, "Good, now we got them [?tense]."
99-100	... and everything, and then the police told him, "Spiderman, you're going to catch them".

LINE	Third Narrative
106-107	... and this kid named, called him Frankenstein.
107	And he said..and he said...
110	And then the others brought a man...
112	and then he put an iron rod through his head....
113	...and then he took it out.
114	Then, then he went to Pennsylvania.
115	and there was a man waiting for him, he's coming.
116-117	And then he took him home, and this pretty girl was there.
122-123	And then, and then...they took him away, and this lady, her name was... I don't know what but--it was a funny name.
124	And, and then when....
126	And then....
129-130	...and he started chok...he chok...Frankenstein was choking him. And then he put him, then...then...
136-137	And then,he...he burned his thumb..the thumb. And, and then....
140	...then he put him in a room, and the man said, "I don't care..."
151-152	And then he came back or something, and then the professor....
155	[JW]: He was going to kill him.
156	He was going to kill him.
157-160	...and then the man said, "What? Well, the monster spoke?" And then the other one says, "No he's just not talking." Then he says, "Put that man down!" and he did....
161-164	got up, and they met. And then he said, "Let's go get the girl."

LINE	Third Narrative (Cont'd)
162-164	And then this one and this one got married. And then the lady went,'n went [gestures], and then, and then she went like this [gestures]. And then, that's all.

Line	Spontaneous Narratives
166-167	"Do you know who Hector's girlfriend is?" And then he told Hector it was me."
169-172	And he told him, "I know nothing." Then he's not going to know anything. "I don't know." Let me say that again. Ah..I know nothing. I never know. Then he said he wasn't going to know all day, and with I don't know, with I don't know, that I don't know. That's the end.
173-174	The watch she gave him dropped, and then [someone calls] OK, I'll be finished in a minute. And then the other.....

Chapter VII

BILINGUAL STRATEGIES OF COMMUNICATION

1 Introduction

In working with bilingual children and adults and reviewing many sorts of data, one is ultimately struck by a very general observation that of the wide variety of possible strategies for communication which the bilingual could hypothetically use, relatively few occur. In general, this is the first indication that a phenomenon is not random. If, for example, the point of code-switching were random with regard to the syntactic structure of an utterance, we would expect that speakers could exhibit any pattern in their discourse and that they could easily repeat or read haphazardly code-switched texts. The many self-corrections discussed in the previous chapters would be attributed to factors other than grammatical considerations, and children would be particularly aided in their learning of English by the ability to insert idiosyncratically already learned Spanish elements into English discourse when their lexicon was lacking. Such a strategy would indeed allow a Spanish dominant child to "learn while doing," but it just does not appear to happen as often as it theoretically could. That is, it is not the case that individual children in a bilingual society regularly initiate new patterns of language mixing based upon certain inadequacies in their lexicon.

This is not to say that certain items learned in English do now show up in the children's Spanish and vice-versa. Color terms, kinship terms, names of foods and so forth from Spanish are often used in English sentences, though not so often as English expressions are used in Spanish discourse. In some cases, we feel that the word or entire expression has been either lexicalized by the community or merely substituted by the speaker in his own language. These latter cases are difficult to isolate, yet in many regards they are as interesting as cases of actual code-switching. The point we wish to make is simply that in the overwhelming number of cases, whether an expression is borrowed or lexicalized on the one hand, or a substitution or code-switch on the other, it is used properly in the context where syntactic considerations are concerned. If, for example, "madre" (mother) is used in English, it is used as a noun, "I gave it to her madre," and not as a verb, "*You shouldn't madre this boy." Though it is conceivable that as a true borrowing by monolinguals, "madre" could be used as a verb in English, it is unlikely that Spanish-English bilinguals would engage in this usage, in principle, on their own. Yet, a student of Spanish who spoke the language rather well was observed to say in English, "They don't repaso often enough." This must be considered to be a mistake where bilingual speech is concerned, for "repaso" is a noun in Spanish, and the verb which should have been used is "repasar." This mistake, furthermore, is a clear indication of an underlying English dominant linguistic competence, as opposed to a bilingual--or ambicodal--competence which is characterized by dominance of neither system. For the bilingual, both linguistic systems must be satisfied. It is the resulting range of compromises which we shall focus upon in this chapter. First, however, let us examine the concept of dominance in the bilingual.

2 Dominance in the Bilingual

Defining the nature of dominance of either Spanish or English in the case of bilingual children such as those with whom we worked, is an extremely elusive pursuit. Although the children studied had different abilities with regard to a perceived level of relative proficiency in one language or the other, it is not certain that this metric alone is sufficient in accounting for the more subtle aspects of dominance associated with a deep level of linguistic competence. Weinreich

(1953), for one, warns of the complexity of the problem and lists several factors which appear to be involved. He suggests that certain dominance configurations may account for specific types of linguistic interference and changes which have in the past appeared to be accidental or even paradoxical. These factors are: relative proficiency, first learning, emotional involvement, usefulness in communication, function in social advance, literary cultural value, and mode of use (visual). The fundamental problem in devising an index of dominance is that these factors are not characterizable by a common standard of comparison or measurement.

While most of the children we studied were felt to be English dominant, this subjective evaluation did not necessarily reflect an absolute measure of constructions or rules in the two languages, nor the knowledge that their English lexicon was more extensive than the Spanish. In some cases, a child who made many types of interference based mistakes in English was still felt to be English dominant or at least only slightly Spanish dominant.

Only a few children were felt to be clearly Spanish dominant. These were children who had not begun to learn English until the age of nine or ten. It was obvious that they began to learn English in terms of already known Spanish grammatical structures, and individual words were used often as equivalents for Spanish words, rather than an English expression of their intent. These children were not observed to mix English words in Spanish discourse, except as an exercise to demonstrate that they knew a particular word in English.

While verbs such as "pushar" (push), "cachar" (catch) and "chitear" (cheat) etc. are established as Spanish lexical items within the speech of even Spanish dominant children, there is no evidence that they are the result of a regular process common to all children whereby any verb may be so adapted from English to supplement the Spanish vocabulary. That is, "Yo lo caché," (I caught it) appears to be an accepted borrowing of "catch" rather than the manifestation of a strategy to avoid mixing codes by using "caught."[1] At the level of the word, dual morphology does not seem to be permitted as a convenience. Nor does the English dominant child have at his disposal a principle which would permit him to undertake wholesale adaptations of English verbs to Spanish on his own as in "?Yo lo breaké", etc. Yet we did observe one such example, whose origin is unclear: "Yo lo tinqué" (I thought it [?] think+é).

The fact that neither Spanish nor English dominance produces adaptations of Spanish verb stems to English, as in "*I cocined the potatoes" (cocinar="cook"), most likely has to do with a very general tendency not to incorporate any Spanish elements in English sentences, a tendency which is related to the fact that English is considered by the bilingual community to be the more prestigous language.

3 Phonological Adaption

The use of Spanish lexical items in English discourse is limited to phonologically non-adapted forms with very few exceptions. For example, "piñata" (hanging pot) which is in Spanish [pinyata] never became [pənyadə] in the English of these children. However, we have noted the use of "chiles" (hot peppers) with Spanish [čiles] and English [čIli:z] pronunciation. "Atole" (corn meal) was similarly heard in English as either [atole] or [ətoli], but most Spanish items retained their phonological shape when used in English: "frijoles (beans), arroz (rice), carne (meat), chorizo (sausage) etc."

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[1] Pfaff (1976), however, appears to believe that the adaptation of verbal infinitives is productive: "...there is an alternative to complete switching, namely adapting an English verb stem to Spanish morphological patterns as in (47) and (48):

47. el venía y chequiaba a las siete...
'he came and checked at seven o'clock'

48. los que sainiaron
'those who signed' (Pfaff, 1976: 6)

Although "madrina" (godmother) was often used in English discourse, it generally showed no sign of being phonologically adapted. One child, LS, was observed to say "My madrina's son me estaba cargando y me tumbó, and it hurt." "Madrina's" was pronounced as an English word, [m^{ə}linə:z]; the [l] is characteristic in this child for [d] or [r]. Though LS was often heard to say [malina] when using the word in English, it is possible that the possessive morpheme of English may have contributed to the cause of this particular phonological adaptation.

Proper names were given a wide variety of pronunciations in English ranging from fully Spanish to certain Spanish-English combinations to full English adaptation. For example, "Roberto" was heard as [roβɛrto], [robɛRto], and [R^{ə}bəRdo^{w}]. Apparent mimicing of Anglo pronunciation of Spanish names as in [Ro^{w}bɛRto^{w}] is often used in a non-malicious way to belittle the addressee or to assert the speaker's desire to be in authority. Expressions such as "?Cómo le vas Pancho?" with an intentionally facetious imitation of an Anglo accent in the extreme, [ko^{w}mo^{w}le:^{y}vaspæ nčo^{w}], were also heard in the same context. The analogue, an affected Spanish accent in English, was extremely rare by comparison in our observations.

4 Borrowing

Adult bilinguals seem to react negatively to an individual's usage of English verbs with Spanish suffixes, as in "Yo driveaba mi carro" and so forth, if they feel that such a form was produced by the speaker because of his not knowing the Spanish equivalent. Such "inventions" become better, it seems, if the listener can feel that there is another purpose involved, such as being brief as in "typear" (type=escribir a máquina), or resolving a technical ambiguity as in "weldear" (weld/solder=soldar). One informant provided many anecdotes of such inventions, and he indicated that certain cases such as "estaba croilando" (he was crawling) are the result of simply not knowing the Spanish term "gatear" (crawl). Whether or not it is true that the speaker did not know, or could not quickly think of, the Spanish word which he was seeking does not really matter. Several points, however, should be made. The listener understood the verb, whereas it is doubtful that he would have understood "he was gatting" in English. The listener saw no reason such as those mentioned above for this usage, and he assumed it to be caused by insufficient knowledge of Spanish rather than an attempt on the part of the speaker to be brief or precise, etc. The listener judged such usage as improper.

In addition to these considerations involved in potential borrowings, it seems that monosyllabic English stems are most easily borrowed into Spanish, bi-syllabic stems less so, and three syllable English stems are rarely used with Spanish verbal morphology. One exception is "telefonear" (telephone). Verb-particle combinations such as "mess up, take out, rip off, etc." are unlikely candidates for adaption to Spanish by bilingual speakers as well. Vowel or diphthong final English stems were not felt to be good candidates for such borrowing either.

The verbal suffix [-ear], among our sample [-iar], is used for most foreign stems. There is apparently a phonological rule which deletes the vowel in this suffix when a palatal consonant precedes: [swičar], [kečar], [pušar], [kyašar], but [testyar], [copyar], [taipyar], etc.

Much of this data was taken from lists provided by Bowen (1952), Espinosa (1917) and Pfaff (1975), and tested on our own adult Chicano informants. We concluded that apparently such creations, and there are no doubt many, are the work of an advanced stage of bilingualism where even intellectual sophistication may play a role. They do not appear in the speech of children, at least not of those we studied. The children studied merely use borrowings which occur in the speech *of the community, and do not engage in actively using borrowing techniques to* their advantage, although, as we will demonstrate, they are seemingly capable of doing so.

Though informants have a fairly clear notion of the possible phonological adaptation of English verbs for use in Spanish, repeated attempts to cause them to use a Spanish verb in an analogous way in English resulted in nothing but the use of infinitival forms: "We have to ganar (win);" "She likes to cocinar (cook)," and so forth. "Did you ganar/cocinar" was generally felt to be worse, however, and "I will ganar" or "I must cocinar" for one reason or another caused disagreement among informants as to their acceptability. Clearly, however, forms such as "*I ganned" or "*I cocined" were dismissed as impossible. That is, the use of a Spanish stem (gan-, "win;" cocin-, "cook") with English verbal morphology was not an option available to the bilingual subjects we interviewed. Indeed, many forms such as those mentioned above were spoken to the children and were not even understood by any of them. "I pegged him" (peg-, "hit") was meaningless to them, and "He pegóed him," with Spanish and English past tense morphology led to a conversation about "Pogo."

5 Interference

Weinreich defined "interference phenomena" as "those instances of deviation from the norms of either language which occur in the speech of bilinguals as a result of their familiarity with more than one language, i.e. as a result of language contact." (Weinreich, 1953: 1). Haugen allowed for three degrees of convergence when languages come into contact: "(1) Switching, the alternate use of two languages; (2) interference, "the overlapping of two languages; and (3) integration, the regular use of materials from one language in another, so that there is no longer either switching or overlapping, except in a historical sense."

(Haugen, 1956: 40). Weinreich appears to use "interference" to mean both Haugen's "interference" and "integration" but excluding cases of code-switching, an event which Diebold (1961: 497) views as "rare, [and] we recognize it as a hypothetical end-point in a typology of interference." Weinreich (1953), who makes no mention of syntactic regularity in code-switching, regarded this phenomenon as only a problem for the psychologist or neurologist when it occurs intrasententially:

> "The ideal bilingual switches from one language to the other according to appropriate changes in the speech situation (interlocutors, topics, etc.), but not in an unchanged speech situation, and certainly not within a single sentence." (Weinreich, 1953: 73).

He goes on to say that "abnormal proneness to switching" occurs in persons who as children were addressed by the same interlocutors indiscriminately in both languages. While we cannot deny that such cases may occur, it is difficult to imagine "indiscriminate" use of two languages by a bilingual.

The term "interference" carries a possible ambiguity in its meaning. It is not necessarily confusion or lack of ability to keep two codes separate which produces the type of linguistic interference usually discussed under this heading. The anaology one should keep in mind is the meaning of the word "interference" in speaking of the patterns created by splitting a beam of light and merging the two components again with a slight phase difference. It is unfortunate that often the word is used as in "radio interference" to denote the introduction of unwanted noise which produces a negative result such as the loss of information from a specific source. Where languages are concerned, perhaps "intermingling" or "interfusion" would be a better term.

Interference, integration and code-switching all seem to parallel the relationship of dominant to lower language discussed by Bloomfield: "In all cases...it is the lower language which borrows predominantly from the upper." (Bloomfield, 1933: 464). Although Bloomfield was speaking principally of the community level with regard to bilingualism, this directionality seems to obtain independent of individual dominance considerations even where "unintegrated" elements are concerned. Diebold defines such elements as "exhibiting an idiolectal variation with no basic alternant acquired in the langue." (Diebold, 1961: 498). It has been our experience that the community norms establish particularly a stronger tendency for code-switching and borrowing when speaking Spanish, and individuals do not seem to go against this tendency.

Of course, from a sociological point of view, the community of bilinguals we studied is in a situation where English is the dominant language, and Spanish the lower in the Bloomfieldian sense. It is not surprising therefore that English is borrowed upon heavily, or integrated into Spanish, while in most cases Spanish elements in English discourse are "unintegrated" and do not achieve stability in the English of the Mexican-American children. Furthermore, it appears to be a constant of language contact that derivational morphology of one language generally may not be used with a phonologically nonadapted or non-integrated form of another language. Various nonce borrowings have been noted, but in all cases where a Spanish verb ending or plural, for example, was used, Spanish phonology accompanies the lexical item.

6 Awareness of Borrowing

Does this mean that we should call any item which is pronounced with a Spanish accent in Spanish a full-fledged borrowing? We think not. "Cookie, pop-corn, Kool-Aid, Hot-Wheels, trailer, etc." are only a few of the nouns we have observed being used in the children's Spanish with either English or Spanish phonology. On the other hand, "un push, el field" appeared to occur only with Spanish pronunciation in Spanish discourse. It is possible that one might wish to include in the notion of "borrowing" the use of certain items which do not really represent code-switching behavior, yet which are not fully integrated phonologically--or at least alternate between English and Spanish pronunciation. Gingrás (1974) has addressed himself to this problem, and we find his distinction extremely useful, but not as a tool for rejecting possibly useful data.

> "I reserve the term 'substitution' for what an individual does and the term 'lexicalization' for what speakers of a dialect may have done. Where it becomes particularly difficult to distinguish between code-switching and either substitution or lexicalization is in sentences of the following types:
>
> (6) Dijo que iba downtown.
> 'He said he was going downtown.'
>
> In (6) the adverb downtown might be an instance of substitution, that is, the speaker may have decided to substitute al centro with the equivalent English word downtown, or it might be an instance of code-switching in that the code has switched from Spanish to English at the point where the adverb is introduced...Of course...it might be an instance of lexicalization." (Gingrás, 1974: 169).

Gingrás does not mention how "downtown" was pronounced, but phonological adaptation, while a necessary requirement for integration or lexicalization, is not in itself a reliable test for integration nor proof positive that code-switching has not taken place. The point as we see it is that for the bilingual speaker, phonologically adapted items create a larger degree of freedom from a morphological standpoint, and it is not impossible that such may be the strategy where an obvious code-switch would have occurred had it not been for restrictions created by the syntax of the utterance.

Beltramo and Porcel (1975) tested adult bilinguals to discover whether variation in the ability to judge words as borrowings is associated more closely with linguistic or non-linguistic factors. They were concerned only with an individual's cognitive awareness of English influences upon words used in Spanish discourse. Individual differences in subjects were not found to be a significant source of variability, and they concluded that "linguistic differences between the various loan types we have examined account quite heavily for the differences in speakers' awareness of English influence." (Beltramo and Porcel, 1975: 133). The categories they used in this research are listed below:

(1) "An English word:" Phonological adaptation or lexical switch.

Examples: Este jaiwei es muy peligroso. (highway)
Quiero limpiar mis closets este fin de semana.

(2) "A word part English, part Spanish:" Morphological adaptation.

Examples: Mi abuela nos hizo una cuilta bonita. (quilt)
Las más baratas son llantas recapeadas. (recapped)

(3) "A Spanish phrase that translates an English phrase:" Loan translation.

Examples: Su hijo va a la escuela alta. (high school)
Luego llegaron Roberto y su mejor mitad. (better half)

(4) "A Spanish word being used a new way:" Loanshift extension.

Examples: Atendemos a la misma escuela. (to attend, std. to heed)
Me dio una lectura porque llegué muy tarde. (lecture, std. reading)

(5) "Completely Spanish." This type includes Spanish words which have cognates in English with a different usage but no attested influence on Spanish. Although given in perfectly acceptable standard useage, these might be doubted as to their "purity" because of an awareness of the English.

Example: Tuvieron una discusión sobre la propina.
'They had an argument over the tip.' (Beltramo & Porcel, 1975: 123)

They found that cognitive awareness of "borrowing" was most acute for English words (lexical switch) and words transferred to Spanish by mere phonological adaptation--both types typified in (1) above. However, pure native words were significantly more easily recognized as Spanish than were phonologically adapted borrowing recognized as English. The authors point out a parallel to Haugen's (1953) findings that there is a high degree of uniformity of practice regarding the adoption of English items in the bilingual usage of Norwegian. The high degree of uniformity in bilinguals' awareness of borrowing reported by Beltramo and Porcel is crucial to any discussion of code-switching, since they both appear to behave in very similar ways in many respects. Yet as have hinted previously, it may be the case that individual borrowing or integration of English elements into Spanish discourse is a level of bilingual usage of language which is available as a strategy of communication only to adult speakers. Furthermore, to the extent that such integration is not caused by performance error, it may actually serve a stylistic purpose.

In setting out to study code-switching in children, we felt that we had to know first hand to what extent these particular children were aware of Spanish elements in English discourse and vice-versa. Experience with them initially told us that they generally were extremely aware of the difference between the two languages and that any talk of mixing the two languages produced in them an uncommonly high level of agitation on some occasions. The results of our testing are analogous to those of Beltrama and Porcel (1975) in an interesting way.

Lists of words out of context were read and recorded at one point, and we found the children quite capable of sorting out Spanish from English. In one case, a child (FM,4) was having difficulty, and his sister told him that "Spanish" meant "like Mom talks to you" and "English" was the way the kindergarten teacher talked. This explanacion helped,indicating that the child was aware that the speech he heard could be distinguished as belonging to one of two systems but was simply unable to understand the task as first presented, perhaps becuase of lack of familiarity with the labels Spanish and English.

The next step was to read children's stories in English on tape and exchange certain words and expressions for Spanish ones. Most items were inserted syntactically into positions felt by us to be points of acceptable code-switches, others were purposely ungrammatical. Also, some English words were pronounced with a Spanish accent as if they were Spanish elements. The children were told that there were hidden Spanish words in the stories, and that they were to ring a bell whenever they heard one. The playing of the taped story and the bell-ringing were in turn recorded for later analysis. Individual children were first tested in this manner, and then groups were assembled--each child with a bell--in order to find out if certain children were consistently faster than others in noticing the Spanish words.

Only about a dozen children were tested, and our impression was that only the very youngest, four years, had real difficulty in performing the task. Actual Spanish words missed were few, and most were probably due to inattention or noise. The children who could successfully perform the task seemed to use as their principal strategy the sound of the word, since English words pronounced with quasi Spanish phonology triggered their response in most cases. "Vibro-detectors" [vaibrodetektors], "caterpillar" [katerpilar], "waterwheel" [waterwil], were consistently reported as "Spanish." Unfamiliar names such as "Ina, Tama, Rere, Pocucohua and Badjina" pronounced as if Spanish were generally noticed by the children as "Spanish." In some instances, "cooked head," used as an epithet, was also a word which caused some children to ring the bell, but often the child would quickly retract his judgment with a statement such as "I'm sorry,!" indicating that he had reacted too soon.

The sound or phonology of an item seemed to override the syntactic possibility of the occurrence of a Spanish element. "Ngayo tree" and "kumara fields" were nearly as popular an item for Spanish judgments as the Spanish words themselves. Again, these foreign words "ngayo" and "kumara" were pronounced with Spanish /r/ and Spanish vowels or diphthongs. However, it is unlikely that combinations such as "roble tree" (lit., oak tree) or "frijol fields" (lit., bean fields), Spanish analogues, would occur in bilingual usage. The patterns are uniquely English, and simply "roble" (oak tree) or "campos de frijoles" (or fields of frijoles) are much more likely compromises to be used in English sentences. Nonetheless, "ngayo" and "kumara" were reported as Spanish by many of the children tested. This is an indication that these children are keenly aware of syllable shapes and vowel configurations, and it is also likely that the Spanish /r/ is a powerful clue as well in their ability to recognize Spanish sounding elements.

It is clear that given the nature of this test, a sort of contest that most of this sample of children wanted to win, the principal strategy and the most efficient for their purposes was to concentrate only on the sounds of the words, not on semantic criteria for acceptance as Spanish, nor on syntactic contextual appropriateness.

Later, we shall discuss the results of a different test in which Spanish words were used with English pronunciation in an English context. Comparing the children's recognition of such items with their recognition of opposite language pronuniation as discussed above, we found better performance on the latter task--though not to the degree that we had expected. That is, for the children studied, actual Spanish words pronounced with an "Anglo" accent are not completely assimilated or hidden in an English context.

7 Acceptability of Opposite Language Elements

We would now like to briefly point out some of the factors which appear to have a bearing on the acceptability of opposite language elements which are independent of any actual grammatical considerations. For example, merely calling attention to the fact that there was going to be Spanish in an English story often elicited comments which reflected a negative affect for the practice: "Boo! Terrible!" "I don't like Spanish words [inEnglish], they sound too emotion[al]." "You can't say Spanish words if it's English." Moreover, the children frequently reproved one of the bilingual Anglo researchers for inappropriately using an English word in Spanish. On the other hand, it was rare for a child to chide another for this practice, although children did frequently incorporate English elements in

Spanish. There are at least two possible explanations for this differential reaction to what appears to be the same phenomonon. First, the children may perceive the phenomenon as appropriate in their speech but as inappropriate in the speech of a non group member. Second, there may be subtle differences in the way in which English elements were incorporated in Spanish by the children as opposed to the researcher. No syntactic differences appear to exist, but there is a possible semantic difference.

Let us consider one sentence which was immediately rejected: "Ahí está en el floor." Syntactically it is the same as many of the children's sentences. However, it is possible that floor is a semantically unallowable element. Haugen analyzed the chief loanwords in American-Norwegian by spheres of activity. He found that the majority of influence came from the store, government, and the American neighbor, but "in home and family life, in church and religion, the English expressions penetrated more slowly; nor did they affect the immigrant's emotional and general behavior to the same extent as his economic life." (Haugen, 1953: 93). A lexical item is borrowed or used as a code-switched element for a reason. The best characterization one might offer for the nature of specific words which are felt to be unacceptable mixes is that there is no obvious reason discernable by the listener for using an opposite language item. Certainly, part of the linguistic competence of the speaker is to know what the listener expects. Often the dominant culture provides the bilingual with a precise term for an object, activity, concept and so forth which relates well to a particular learning situation. At times, the speaker reports the reason for his choice of an English lexical item in Spanish discourse as being an inability to find the correct word in Spanish, although this seems to us to be often tantamount to a nonce borrowing even though the word is not phonologically or morphologically adapted to Spanish. Clear cases of the inability to think of a word, followed by the use of a single English word in a Spanish sentence are relatively rare. Usually, such an occurrence is accompanied by a lengthy passage in English, seemingly triggered by the need to use the English word in an English context.

The actual categories which permit cross-linguistic usage are deeply rooted in the background values of the particular community of speakers. It would seem that individual speakers must conform or be identified as peripheral members of the speech community. This ability is no doubt as complex as that involved in knowing which values are suitable for derision and merit.

Not being able to think of the correct term for "floor" in Spanish is apparently not a sufficient, obvious or credible reason for using it. Perhaps, if a slight pause had preceded its use, a sufficiently clear signal would have been given that the reason for using "floor" was not a stylistic maneuver, but not knowing the word "suelo." Common examples of this type of usage are not hard to find: "Esos barcos de madera...ah...rafts." Here, the precise word "rafts" was sought after a clear indication that the Spanish description was not exact enough.

On the other hand, there is ample evidence in our data and other research to suggest that quite often a code-switch is used even when a satisfactory equivalent is known. Repetition in translation often follows an item as in "las arañas eran sus babies...sus bebitos." The stress is usually that of a self-correction, and it may be that something about the use of a particular English item strikes the speaker as incorrect at the time, or even that the combined use of both items expresses precisely what the speaker intends to say. It is difficult to know exactly why such cases occur, although utterances such as "Mira! Look!" seem to be a stylistic emphatic device.

The use of some items such as "man" or "girl" seems to be cleary prohibited in Spanish. Certainly, one quality these words share seems to be that they are too common or no more precise than their Spanish equivalents "hombre" and "muchacha." Whatever the reasons, we cannot stress too heavily the importance of this consideration in all testing procedures involving bilingual judgments of any sort. The use of the wrong lexical item from a semantic point of view, as in "?Yo vi a un *man* ayer." seems to create just as much of a feeling of unacceptability among bilinguals as does the incorrect grammatical breaking of a sentence into Spanish and English parts: "*Yo saw a un hombre ayer."

Borrowing seems to parallel individuals' usage of opposite language elements which cannot be considered to be "borrowed" by the community.

> "The borrowing of any one word can be explained by one or several of the various enumerated causes of lexical interference. Yet, remarkably, some words seem never to be transferred. In American Yiddish, for example, *vinde* has replaced *fenster* 'window,' *flor* is common for *podloge* 'floor,' but English *door* is never borrowed; *točn* has practically replaced *rirn*, *on-rirn*, *tsu-rirn zix tsu*' to touch'; but *buy* or *sell* are not used even in the most careless Yiddish speech. *Walk* is borrowed; *talk* is not. From a study of the general causes of interference, the transfer of many of these words might have been predicted, but it has not taken place. This resistance to transfer on the part of some words...is one of the unsolved problems of language contact." (Weinreich, 1953: 61).

On the same subject, Haugen (1953) observes the following:

> "But we have seen repeatedly how certain very common terms like *kniv* 'knife' and *skei* 'spoon' were not displaced, while others apparently equally common were, such as *gaffel* 'fork'....The word *bed* was not generally borrowed in its basic meaning, but in the transferred meanings of *seedbed* or *flower bed* it was regular. It is thus quite impossible to predict with any confidence that a given word cannot be borrowed. One can say only that it is highly probable that words of high frequency in the native language are less likely to be displaced than those of low frequency." (Haugen, 1953: 96-97).

Ornstein's (1976) summary is typical of many reported experiences of language contact with regard to syntactic categories:

> "As has been noted, also among other contact cases, Raramuri, in common with other languages, tends to borrow nouns more readily than any other word class. Beyond this, loans from other categories are rare, although, as noted elsewhere here, closer investigation of existing calques needs to be performed. At any rate, the literature on borrowing appears to indicate that adjectives tend to follow nouns in frequency, with verbs often next, and other classes less well represented. Finally, reliance upon internal resources seems to inhibit borrowing of nouns referring to animate beings, with most of the loans limited to inanimate referents." (Ornstein, 1976: 84).

8 Children's Ability to Adapt Phonologically

Another area which we felt was worth investigating was the ability of the children to phonologically adapt English words to Spanish pronunciation. The ability of several children to engage in the opposite practice, pronouncing Spanish with an Anglo accent, as a humorous device had been amply observed. We dealt mainly with only three of the boys as they seemed to enjoy performing the task. Some of the others felt that the words so adapted sounded "stupid."

Sixteen words which we felt they probably did not know in Spanish were used as test items. They were told to proncounce them as though the words were Spanish. Although a variety of responses was obtained in each case, certain interesting observations are worth noting. Test items such as "pressure" which caused any of the children to produce the actual Spanish equivalent, "presión," were thrown out. The words and their respective pronunciations are given below:

01. Test Item	ES	TA	JM
propulsion	[propəsynón]	[propsayón]	[prosyón]
misdemeanor	[mizdabdanór]	[misteminár]	[misenár]
candor	[kandér]	[kandár]	[kandedór]
sulfuric	[selfír]	[selfirár]	[salfarín]
nitrous	[naitrə́s]	[naitrís]	[naitrɛ́s]
capacitor	[kampasár]	[kampasadár]	[kapasadér]
inductor	[indarkór]	[indaktór]	[indisár]
oscillator	[asaladár]	[asaledár]	[asolidár]
frequency	[frinkɛnsír]	[frinkɛnsár]	[infersárr]
"the" frequency	[fríkinsa]	[fríkɛnsa]	[enfrínka]
ventilator	[βɛtadór]	[βɛntəlár]	[βɛnterrár]
thermostat	[θɛ́rmosta]	[θəRmostár]	[θəRmastár]
crenelation	[krenesár]	[kanelesyón]	[kresyón]
piston	[pistán]	[pistán]	[pistár]
cylinder	[salIndér]	[silindár]	[silinér]
filiment	[fɪləmɪ́n]	[filimán]	[filimár]
(sangria)	[saŋgría]	[saŋgría]	[saŋgría]

Stressing the final vowel was a popular tactic for making these words "sound Spanish." The choice of Spanish vowels to fill in the unaccented schwa positions in English seems to be matter of individual taste in many cases, though certain trends suggest that these convictions may follow some general rules. Perhaps the most notable change the children incorporated was to change many of the words apparently to Spanish verb infinitives. Many of the pronunciations end with stressed [-ar], the most common verbal category suffix and that used for borrowed stems. However, borrowed stems usually include an additional vowel in the stem for adaptation: test, "testiar;" weld, "weldiar" etc. None of the children did this with the English stems, yet when the item "frequency" was repeated as "the frequency," stress was moved to the syllable which is stressed in English, despite the fact that in two cases, [fríkinsa] and [fríkɛnsa], stress is not according to the general rules of Spanish phonology. It is curious that the final [-r] in so many cases should cause a change in the stress which the child heard originally, when the basic stress rule is violated elsewhere. This is basically why we feel that the children, for some reason, were attempting to create verbs of these items in many cases. Possibly, the category /VERB/ carries with it a stress pattern since all infinitives do have final stress, though not all [-r] final words do.

Note that in many cases polysyllabic stems were reduced to bi-syllabic stems with the verb infinitive suffix added. [krenes+ar] from "crenelation" is just one example, and this tendency was mentioned earlier with regard to the actual borrowings which have been observed by us and by others. That is, stems with more than two syllables are generally not borrowed from English.

"Sangria" was said to be an easy one by one child, though none said they had ever heard it before. It is not surprising that all produced the actual Spanish word from which the English derives, yet it is certainly quite interesting that this is the only item upon which there was agreement by all three children. It is likely that part of these children's repertoire of knowledge includes Anglo pronunciation of Spanish items and conversion of Spanish words, so pronounced by Anglo-Americans, to Spanish is aided in principle.

Certainly many additional comments could be made concerning these "adaptations," but one point only is crucial here. Even though certain English phonemes do occur in these Spanish pronunciations, consonants such as unaspirated stops are present throughout the items, English [R] occurred only rarely, and vowels were not diphthongized, though [I] and [ə] did occur. [θ], however, was not changed by any of the children, though it does not occur in Spanish. We feel that the data indicate that the children are quite capable of adapting English items on their own to Spanish phonology, despite the great variation among the three children in just how it should be done in practice. Consequently, the fact that the children we studied generally do not engage in such a practice for the purpose of broadening a lacking Spanish lexicon seems not to reflect a linguistic inability but rather a community convention.

One final note concerning phonological adaptation--we mentioned previously that "pressure" for example, was actually translated by one child to Spanish "presión" [presyón]. Several other words were known in Spanish as well. Upon coaxing, TA produced [p'Rɛšɜ́r] as the Spanish "adaptation" of "pressure." Note that aspirated [p'], English [R], and schwa [ə] all accompany a final Spanish [r], with final stress. This heavy English influence was not evidenced in any of the pronunciations of items the children did not know. It may be that a familiarity with an English word or knowledge of a Spanish counterpart, or possibly both, is enough to inhibit adaptation to Spanish phonology. This would explain in part at least why such adaptation has not become a common strategy among the children when Spanish is being spoken.

We take for granted the ability of these children to adapt to at least some degree of English lexical items to Spanish phonology, and vice-versa. It is conceivable that some types of bilinguals might not be able to do this. One would think that such competence on both sides of discourse in a community would result in much phonological adaptation in the speech of the children. It became clear to us, however, that we were dealing not with a facet of linguistic competence which could freely be used for the purpose of providing a path of low resistance to bilingual speakers, but rather a highly marked device used principally for games and stylistic reasons. It appears that among these children, phonological adaptation of lexical items to the opposite language may conflict with a principle of maximization of information transfer, rather than facilitate comprehension and performance.

Certain phonological sequences such as [rR] or [Rr] which arise when opposite language elements are juxtaposed would seem to be destined to fall victim to a very plausible phonological rule which simple creates a sequence which either English or Spanish permits: [RR] or [rr]. However, this is not the case, for it is not uncommon to hear "for Roberto" [f,Rroβεrto] or "voy a tomar red" [tomarRεd]. In fact, self-corrections have been observed in some instances where assimilation had occurred. While very little confusion of [r] and [R] was observed, occasionally [rr] is used in English as in the following: "I put it on top of here." [aypʰUrrIt...] Still, some young children use [l] for both Spanish [r] and English [R]: "grande" [glande]; "Rosa" [losa]; "Mary" [meli]; "afro" [aflo]. Some use [l] for intervocalic [d] in Spanish or English: "nada" [nala]; "hitter' [hIləl].

Of course, we are not ignoring the fact that phonological adaptation of vocabulary items from one language to another is an established fact. We simply point out that these bilingual children, despite having the capability of extensive adaptation, choose instead to preserve the phonological shape of cross linguistic lexical items. We also believe that the strongest factor differentiating Spanish from English for these children is the phonological shape of the item. Furthermore, there does not seem to be a highly consistent or stringent unifying set of rules for phonological adaptations in Spanish among even three children who play together frequently, though their pronunciations do not strike one has haphazard.

Weinreich, taking a different approach from that of Swadesh (1941) who regarded the two sets of sounds in the bilingual's repertory as a single systems states:

> "Since the bilingual is ordinarily aware of the language to which his utterance 'belongs,' we may characterize the utterance by the feature of 'Russianness' or 'Englishness,' extending over its entire length. Aspiration of the voiceless dental stop would then be an automatic concomitant feature of Englishness,...This restatement of the facts in terms of two coexistent systems rather than a merged single system, probably corresponds more closely to the actual experience of the bilingual." (Weinreich, 1953: 8-9).

9 Code-Switching

Defining "code-switching" is as tricky a problem as defining "code" itself. We have found no solid workable definition, and those who write about the phenomenon generally take for granted that the reader knows what the term means. As we have mentioned, several researchers such as Gingrás (1974), Pfaff, 1975a, b) and Seaman (1972) have all taken slightly different approaches. The latter appears to equate code-switching with "phonologically unadapted:" "The freedom with which Greek-American bilinguals code-switch back and forth...[would make] the list [of unadapted English forms] as endless as the English dictionary...the unadapted English words... are not linguistically very interesting." (Seaman, 1972: 195).

Gingrás (1974) appears to attempt to adhere rigorously to a distinction between a real "code-switch" and possible cases of "substitution" or "borrowing," while Pfaff (1975) is more willing to consider all opposite language usage which is sentence internal as different manifestations of one phenomenon. No one to our knowledge has actually drawn a line which unambiguously separates the two codes for the purpose of describing bilingual behavior. For example, should we consider phonological adaptation to be the determinant of code adaptation, or can a bilingual "borrow" from English without adapting phonologically? This seems to be what Gingrás meant by "substitution." Furthermore, what is meant by the phrase " a sentence of language X" where the bilingual is concerned?

We have attempted to point out that in most instances, the children in our study probably were code-switching when an English word was used with English pronunciation in Spanish. Yet such a metric is not reliable for all bilingual discourse, for it seems to us that the distinction between code-switching and borrowing-integration-substitution lies deeper than mere phonological considerations for many bilingual individuals and societies. How an item is pronounced is but the tip of the iceberg, as it were, and this may be influenced by many factors including the abilities of a speaker to perform phonetically.

If we are to take the term "code-switching" literally, we must include in our definition an alternation of all linguistic elements including syntax, phonology, morphology, semantics and even cultural and social elements. In fact, taken too literally, code-switching could be paradoxical since the "code" used by an individual is the entire repertory of devices he uses to communicate linguistically, and code-switching is one of them. In some sense, the bilingual does know two languages, but they make up the code which he uses to communicate. So how, then, could switching of codes be possible? It is clear that code-switching is a phenomenon which must make a systematic reference to the elements of each language of which a bilingual has knowledge. The extent to which an individual has developed intuitions concerning acceptability of code-switches is one measure of his code-switching ability. On the other hand, a person for whom opposite language elements do not interact with syntactic patterns which satisfy both linguistic systems, but only one, may be said to be substituting certain elements from another code in an essentially monolinguistically dominated utterance.

Often, syntactic interaction is not noticeable, as when a Spanish noun is used in an English sentence, or vice-versa. The use of opposite language verbs, adjectives, noun phrases and so forth often unambiguously shows that syntactic and morphological patterns from two codes have been used in a single sentence. One cannot assume, therfore, that any occurrence of an opposite language noun, where Spanish and English are concerned, is not an instance of a switch of codes, only that it is difficult to prove.

10 Bilingual Types

In discussing the "incipient bilingualism" of Huave-Spanish speakers, Diebold states that his data "strongly suggest that sociological factors like the age of learning, the learning situation itself, and intergroup social relations are equally crucial factors in determining the form of Spanish-derived interference phenomena in Huave." (Diebold, 1964; 505). The other factors to which he alludes concern the degree to which interference is determined by the structures of the two languages in contact. We feel that such sociological factors also bear upon any attempt to resolve the linguistic distinctions which must be made between at least two types of bilinguals--coordinate and subordinate--where code-switching is concerned. The coordinate bilingual has been called the "true bilingual" (Macnamara, 1970: 28), having learned the two languages in two different contexts, and "subordinate" is generally used to characterize someone who has learned a new language with the help of another by the so-called "indirect method." The referents of the signs in the language being learned may then be not actual "things," but rather "equivalent signs of the language already known." (Weinreich, 1953: 10). Some have made a further distinction--the compound bilingual. Macnamara describes these as "those who either learned one language through the medium of another, as in old fashioned language classes, or learned both languages in the same context, the home for instance." (Macnamara, 1970: 28).

It seems clear that the transition from subordinate to coordinate does take place for certain individuals, though it is not obvious how this occurs. It is indeed likely that bilingualism need not be entirely of one type in a community or in an individual, as Weinreich points out. A test designed by Saer (1931) appeared to be capable of determining whether Welsh-English bilingual children were preoccupied with translation. Translation responses in word association tests were taken to be an indication of the compounding of signs.

The children we studied generally were not reliant upon translation from Spanish or English, except in the clear cases of extreme Spanish dominance. However, one area, color terms, may be semantic domain which involves compound signs for the children. While researching the acquisition and use of color terms among these children, one question we sought to answer was "Do the children have one semantic system or two?" As we indicated in chapter IV,

> "...the answer would appear to be one. The focal choices are almost identical, and the variations in boundaries between the two languages do not appear to be greater than those between different children in the same language, nor do they appear to follow any particular pattern. These facts, together with the observation that the children often code-switch when using color terms (apparently using whichever phonological representation of a color sememe first comes to mind) and the observed code-switches for clarification of our instructions in the tasks, indicate to us that the children have but one system."

The terms which we have used to refer to the different types of bilingual are essentially references to the learning process. It does not necessarily follow that such psychological constructs play a unique role in the determination of which linguistic principles of borrowing or switching will be called into play by a particular social situation. Nonetheless, certain sociological phenomena appear to interact with the manner in which the second language was learned to produce a stable framework for language alternation. Situational separateness of the two languages and the children's mobility among bilingual and monolingual peers are the two most important factors in creating a need for the development of a syntax of code-switching. We feel that these sociological factors are predominant in explaining why code-switching in some cases is characterized by extensive phonological adaptation, if in fact it is code-switching at all, while among these Mexican-American children such a practice is rare.

11 On Constraining Codes

If one takes the stand that the co-occurrence of codes in a string of morphemes which is perceived to be a sentence is restricted only by the whim of the individual who is unfortunately cursed with linguistic competence in two codes, then it will be difficult to explain the fact that within any given sentence of either language, there are elements which, when in the opposite language, cause the impression of ungrammaticality and even lack of comprehension. If a bilingual did in fact have the inherent ability to use his two codes alternately with no regard for syntax, we should expect at least that he should be able to count from one to ten alternating Spanish and English on each number, as in 1, where no syntax is involved:

1. a. One dos three cuatro five seis seven ocho nine diez...
   b. Uno two tres four cinco six siete eight nueve ten....

We have asked nearly all of the children and many adults to perform this task, and it is obviously an extremely unnatural linguistic operation for all who try. In fact, the bilingual child we have attempted to describe is no doubt less suited for the task than the compound bilingual who has learned Spanish numbers as names equivalent to English numbers.

The strong form of a claim that codes may alternate randomly within sentences predicts that every other word may be in Spanish, at least, and at worst that every other morpheme may be so alternated, as in 2:

2. a. *_Yo_ am _cortando_ the _pan_ b. *_Yo_ am _cort_ing _el_ bread.
a'. *I _estoy_ cutting _el_ bread. b'. I _estoy_ cut_tando_ the _pan_.

Native bilinguals reject such sentences, and certainly no such word as "*be_aba_" ("was," [be+aba]) or "*_cort_ed" ("cut," [cort+ed]), with morphology from both languages could exist without first having the stem integrated into the language of the suffix-phonologically and semantically. In other words, it is not possible to mix codes at the word level: bi-codal words cannot exist. A verb, for example, which retains its native phonology, may not enter into a morphological combination producing a word with opposite language suffixes.

3. a. *We _rellenar+ed_ the peppers.
rellen+ed

b. *Nosotros _stuff+amos_ los pimientos verdes.

We have mentioned the case of a child saying "my madrina's son," and observed that "madrina's" was heavily influenced by English phonology, even though "madrina" is often heard in English pronounced as a Spanish word. It is possible that this adaptation occurred in order to accomodate the possessive suffix, but we emphasize that we do not believe it _impossible_ that a word could be pronounced with Spanish phonology and still have an English affix--it is unlikely, at least without special stylistic significance attached to such usage. Noun plural suffixes, similarly, are not used on nouns of the opposite code.

However, the bare infinitive in Spanish or in English may be used in a sentence of the opposite language:

4. a. We're going to _rellenar_ the peppers.

b. Vamos a _stuff_ los pimientos verdes.

but a Spanish noun may not be used as an infinitive in an English sentence:

5. a. *They don't _repaso_ often enough. ("el repaso," the review)

b. *We're going to _repaso_ this lesson.

c. *They had to _cadena_ the madman in his cell. ("la cadena," the chain)

Both "repaso" and "cadena" have English equivalents which are ambiguous as to whether they are a verb or noun, but the Spanish infinitives "repasar" or "encadenar" must be used in these English sentences if they are to be acceptable.

It must be said that generally the use of an English item in an otherwise Spanish sentence, as for example in "Voy a decide mañana." is somehow more tolerable among adult informants, and to a large degree among the children also, than the opposite--Spanish item in an English sentence, "?I'm going to decidir (me) tomorrow." This simple fact often gets in the way of judgments of the latter sort based solely on syntactic considerations. Our adult bilingual informants seemed to agree that a pause before "decidir" in the latter sentence, as in "I'm going to...decidir tomorrow," makes it much better. This might indicate that the listener is now aware that the verb "decidir" is being used in English as a last resort, or at least that he knows that the speaker has not unwittingly used a Spanish element in an English sentence. These sorts of considerations derive from social stigmas which become attached to various classifications of departures from "normal speech," and they have been discussed in earlier parts of this chapter. More examples will be given in the following section.

The "pause phenomenon" shows up elsewhere as well. Whereas the children often used English adjectives in Spanish sentences, especially color adjectives, some were apparently uncomfortable with certain positioning with respect to the noun. A few seemed to prefer "Quiero el carro red," while "los fast carros" or "el red carro" in Spanish sentences, and "a motorcycle verde," in English sentences were the pattern for others. Interviews with adult Chicano bilinguals indicate that "Tengo un fantastic carro" is preferable to "?Tengo un carro fantastic." Of course, the Spanish adjective is normally not moved to a position before the noun as in English. Now, the latter type, with an English adjective in Spanish position, was consistently felt to be much better by our informants if a slight pause occurred before "fantastic" as in "Tengo un carro...fantastic." Much more will be said on this subject later, but it appears at least that the pause may be a signal that a rule has been violated, and that the speaker knows it, acknowledges it and is not therefore constrained to repeat a portion of the sentence. It is likely, furthermore, that the child who uses English color terms in Spanish adjective position, despite the English phonology, has not used an English code-switched item but rather a deeper level mixture which must treat "red" for instance, as a Spanish lexical item.

We feel that phonological adaptation does not preclude the possibility of a code-switch having occurred. PA, for example, while being interviewed by a Chicano researcher, partially adapted several English items to Spanish phonology, apparently as a courtesy to her addressee. Although he was in fact bilingual, he spoke to PA in Spanish only, and she had no way of knowing that he had any fluency in English at all. Examples of this pronunciation are "el field six" [el fi:l sIks]; "el nursery" [el N^{ə}Rsəri:^{y}]; "en third grade" [en θəR gre:^{y}d], and several proper names of Anglo nursery owners. One has the distinct impression upon hearing these pronunciations that they arise out of her concern that the researcher understand, and we have no reason to assume that for PA these are not actual code-switches. Nor do we believe that the lack of phonological adaptation is a necessary sign that a code-switch has taken place. The discussion in the previous paragraph was intended to show how this criteria alone is insufficient.

Chapter VIII

INTRA-SENTENTIAL CODE-SWITCHING

1 Introduction

Linguistics has made many well-founded claims to support the usefulness of formulating a set of rules to account for both judgements about and production of language X, Y and Z. Furthermore, it is difficult to imagine how the fundamental concept of monolingual speakers acquiring tacit knowledge of grammatical relationships could be wrong. Linguistic competence in language X is the consequence of one's need to communicate with speakers of language X. Tacit knowledge of languages X and Y is a trait of persons who have had a need to communicate with speakers of language X and language Y speakers as well. Speakers with a high degree of linguistic competence in both X and Y are said to be bilingual. In the course of speaking with other persons who are bilingual, or perceived to be bilingual, these speakers often exhibit dual linguistic competence within a turn of speaking marked by definite final pitches and pauses, or within what is often linguistically a sentence. Inasmuch as there exists an ability on the part of these bilingual speakers to accept or reject communally certain combinations of language X and Y within a sentence, it will be useful to speak of this ability as "bilingual competence", or a tacit knowledge of the principles developed by the speech community for allowing communication to occur when elements of language X and language Y are used within the same sentence.

We are concerned primarily in this chapter with discovering the syntactic limits on the occurrence of two codes in a single sentence. We will approach the problem by examining several types of intra-sentential code-switches involving Spanish and English which were observed in the discourse of the bilingual Mexican-American children studied, and by reporting experimental findings derived from testing these children.

When two linguistic systems are represented within one sentence, certain conflicts are produced by differences in the syntactic devices used in both languages for the same purpose. That a bilingual speech community does in fact resolve such conflicts by tending to favor a particular pattern would seem to be a rational hypothesis. One alternative is an infinite range of individual patterns developing freely among speakers within the speech community. A third possibility is that universal principles predispose speakers of any combination of natural languages to specific compromises when syntactic systems come into contact. "Bilingual competence" would then be a predictable artifact of language contact. In describing the syntax of code-switching, there appears to be room for all three hypotheses. A fourth possible view, that syntax is irrelevant to the description of code-switching, we believe to be false. Furthermore, we suspect that the most natural description of the syntax of code-switching should be able to account for the apparent continuum of "degree of bilingualness" in individuals by demonstrating that both syntactic systems are dominant in the "true bilingual", or perhaps that neither system may dominate--two positions which are difficult to distinguish. At the other end of the spectrum of being bilingual, the individual with little grammatical competence and a knowledge of words in the second language should exhibit strong dominance in his first language when switching codes.

2 Excepting the Unacceptable

We have mentioned elsewhere that for some speakers the placement of an adjective in Spanish sentences is acceptable before the noun "under certain circumstances". While there is a small class of adjectives in Spanish which may so occur, "un buen viaje; un gran senor", the reason for placement of English adjectives in this position seems to be related to the fact that the adjective is English: "Tiene un fantastic carro." (He has a fantastic car.) In English sentences, some speakers postpose certain adjectives, apparently just in case they are Spanish: "I want a motorcycle verde." (I want a green motorcycle.) If it were the case that these same speakers had been observed to accept "*I want a motorcycle green" and the like, then we might assume that Spanish dominance was responsible for a type of linguistic interference which inhibits adjective movement in accordance with the rules of English. Similarly, an English dominant speaker might say "*Tiene un fantastico carro" because of an identification with the English positioning of adjectives as in "...a fantastic car".

Whether speakers might occasionally utter sentences of the sort marked above with an asterisk or not is beside the point, though it must be said that mistakes of this sort are rare among the bilinguals studied. What is important is that an unambiguously English adjective, for example, is acceptable in English position in a Spanish sentence, while its occurrence in Spanish position is not: "*Tiene un carro fantastic." Upon requesting certain informants to use the French "fantastique" in the same sentence, they invariably placed this "loanword" after the noun: "Tiene un carro fantastique." We do not attribute this placement to their knowledge of French, but rather to their ability to tell a loanword from a change in code. Testing of the bilingual children in our study indicates that they place Spanish sounding Berko-type test items, or nonsense adjectives, according to Spanish placement rules. English sounding nonsense adjectives, though not tested extensively, were generally converted to Spanish pronunciation for use in a Spanish context.

Apparently, when the two rules of adjective placement, English and Spanish, are felt to be genuinely in conflict, because of a deep awareness that the opposite code is being used in the designation of an adjective, the bilingual opts for a compromise. That is, he permits the code of the adjective to control its placement, rather than relying upon the code of the utterance or sentence. We will call this variety of code-switching, code-mixing as opposed to code-changing. Both types will be discussed in detail in this chapter. It is only when the two systems of adjective placement are felt by the individual to be firmly established that we find that a resolution of a conflict must be made. Speakers who may not be characterized in this way would be expected to disagree with bilinguals' judgements of acceptability which are the product of a delicate equilibrium of dual linguistic competence. Furthermore, one might also expect social influences to inhibit the manifestation of patterns characteristic of dual linguistic competence. We believe that this does in fact happen, and it serves to complicate further the description of code-switching.

The implementation of a principle which relies upon the code of a particular word, rather than an overall code of the sentence, for selecting a movement rule may at first seem to be a highly marked situation, or a bit of linguistic finesse which is just too difficult for speakers to manage without a large amount of effort. Where bilinguals are concerned, it is probably more accurate to say that the *lack* of such a principle would be a complicating factor. We have chosen to view this matter as outlined below:

1.

A. I want a/*un

B. Yo quiero un/*a

$$\left[\begin{array}{l} \text{car} \\ \text{car } \underline{\text{verde}} \\ \underline{\text{carro}}\ \underline{\text{verde}} \\ \text{green } \underline{\text{carro}} \\ \text{green car} \\ \underline{\text{carro}} \end{array}\right]$$

That is, all choices of adjective/noun combinations acceptable in Spanish are acceptable in English as well, provided the proper determiner is used. The determiner, for now, is in the same code as the verb tense. We have starred opposite code determiners here merely for clarity, though later we will discuss conditions under which "I want *un car*", for instance, may be used.

Unacceptable or unlikely combinations as shown in 2 are similarly unacceptable, to varying degrees, in sentences of either language. We view the paradigm in 1 as the bilingual code-mixing pattern, but language dominance factors may create a preference for one of the choices offered by 2:

2. A. I want a/un

B. Yo quiero un/a

$$\left\{\begin{array}{l} {*}\underline{\text{carro}}\text{ green} \\ {*}\underline{\text{verde}}\ \underline{\text{carro}} \\ {*}\text{car green} \\ {*}\underline{\text{verde}}\text{ car} \end{array}\right\}$$

If it were not for the condition upon adjective movement that causes the rule of the code of the adjective to move the adjective, then there would be two completely distinct surface sets of noun phrases needed when code-switching in Spanish or English. We would even have every reason to expect "yo quiero *un car green*" if the adjective were placed according to the movement rule of the sentence code. This latter principle, it seems to us, would be a totally unnecessary complication of the grammar of code-switching for bilingual individuals who have mastered both systems.

The noun phrase "un green carro" or "un car verde" (cf. 1) etc., must occur in a "Spanish sentence", while "a green carro" or "a car verde", must occur in an "English sentence". We shall defer elaboration on the notion of the code of the sentence until we have more sufficiently outlined the problem. This approach enables us to regard "un car" as a Spanish NP, and "a carro" as an English NP. Each is marked for code by the determiner, and not by restrictions on the code of each of the elements. We could in principle have an "infinitely long" string of adjectives and a noun, all in English, with a Spanish determiner, and the NP so formed would be "Spanish." It is no longer a mystery, when the matter of code-mixing is viewed in this way, why the determiner is never the only element of a sentence which is code-switched, and why sentences with code-mixes are generally felt by bilinguals to be in Spanish or English. The determiner, among other things, serves a function in code-switching. One of the factors involved in the establishment of "sentence language" is the determiner, and in this capacity it is not subject to being switched itself, unless the code of the sentence is changed. This phenomenon, we call code-changing. It differs fundamentally from code-mixing in that sentences which have internal code-changes are perceived by informants to be neither in Spanish nor in English, but in both. We will present experimental evidence which tends to support this distinction a bit later.

Even the lack of a surface determiner, a device used in English with singular nouns to denote a "generic" usage, may mark an acceptable code-mix as in the following:

3. a. I like *[Ø]* *arroz*.
   b. *I like *the* *arroz*. (generic sense)
   c. °* I like *el* *arroz*. (generic sense)

Of course, the reverse is true for a code-mixed NP marked for use in a Spanish sentence, as in 4:

4. a. °*Me gusta *[Ø]* *rice*.
   b. *Me gusta *the* *rice*.
   c. Me gusta *el* *rice*.

Again, we point out that sentences 3c and 4a, marked with [°], are indeed possible *code-changes*, but a principle reason why they are *unlikely* code-changes in actual discourse may be that the sentence is just too short--a very difficult quality to state scientifically. That is, it is difficult to imagine what might cause a speaker to bother to change the code half way through such a simple sentence. This is the sort of factor which has caused some to suggest that there are no rules, but one must bear in mind that the initial reason for code-switching in the first place is not syntactic but stylistic, essentially. It should not be surprising that some of the same notions which invade syntax from the realm of stylistics should show up in code-switching.

One more word on the noun phrase is in order. We mentioned earlier that while some speakers reject "Tiene un carro *fantastic*", they accept the same sentence with a pause before "fantastic": "Tiene un carro...*fantastic*." We must somehow capture this fact in a natural explanation consistent with our preceding analysis. Where an NP is felt by the bilingual listener to have been generated as a unit, this unit must meet certain requirements with respect to adjective placement. This does not exclude, apparently, a possible afterthought, providing that a signal is given that the adjective was added in Spanish position after the NP "un carro" had been generated as a unit; that signal is the pause. This "way out" for a speaker does not exist in the competence of an English monolingual, for he would have to say, "I have a car...a fantastic car" and not "*I have a car...fantastic".

The preceding examples are an instance of a syntactic compromise brought about by a need to resolve a linguistic conflict in the bilingual approach to code-switching. We stress that these considerations may or may not be felt to be significant by some speakers, and to some extent this characteristic describes the type of bilingual in question as well as the social situation in which the two languages are found.

3 The Ideal Bilingual

Linguists speak of the "ideal listener" and the "ideal speaker" when seeking explanations to grammatical enigmas. It is a subtle but necessary concept for eliminating much of man's creativity and outright mischief from the early stages of linguistic probing into an already complex problem. But as long as everyone seems to know that the concepts are not "sacred cows", they may safely be altered in actual detail now and then, and their existence poses no imminent threat or insurmountable obstacle to a field of study, as did certain "ideal" theoretical endpoints such as geocentrism, ether, and phlogiston. The "ideal speaker" transmits only what he intends to transmit in a code which is perfectly intelligible to the "ideal listener". Ideally, the former's thoughts are impressed upon the mind of the latter through the use of the speech channel. Such an ideal produces a rather bizarre circularity. Only those speech acts performed by the "ideal speaker" which transmit other than the intended information are "misunderstood" by the "ideal listener".

The listener is less than ideal if he obtains information not intended by the ideal speaker from his utterance. But that makes the speaker non-ideal. It is important to have a clear concept of just what the ideal is in linguistic description. Lack of "performance errors" is one possibility. But is the use of code-switching to be included in the list of performance errors?

Weinreich apparently felt that code-switching was not an aspect of the ideal competence of the bilingual-intrasentential code-switching particularly:

> "The ideal bilingual switches from one language to the other according to appropriate changes in the speech situation (interlocutors, topics, etc.), but not in an unchanged speech situation, and certainly not within a single sentence." (Weinreich, 1953: 73)

He allows for the marking off of expressions from another language with "special voice modifications" and more or less suggests that those who have difficulty in maintaining or switching codes as required may have a neurological abnormality in a "special language-switching mechanism" which is located "at the posterior edge of the Sylvian fossa and in the adjoining parietal regions of the brain." (Weinreich, 1953: 72)

We cannot dispute the neurological explanation of code-switching facility, but our suspicions are that factors such as "age of learning" and "social situation" play a predominant role in predisposing a person to an ability to code-switch. In contrast with Weinreich, we believe that the "ideal bilingual" makes use of all devices available to him for the purpose of communicating the information he intends--this includes code-switching within sentences, but only to the extent that the "ideal bilingual listener" can comprehend. Obviously there is no language without society, and there can be no extensive communication through the use of code-switching without a society of bilinguals We maintain that the use of codeswitching intrasententially is simply one device available to the bilingual in a bilingual community for linguistic expression. The ideal bilingual speaker uses this device in a way such that the ideal bilingual listener will receive the intended information. We have defined a need for a linguistic description of grammatical competence possessed only by bilinguals in a bilingual community.

4 Grammatical Judgements of Bilingual Utterances

We believe that Gingrás is correct in hypothesizing that "there seems to be a set of rules or constraints that are operative, and in order for a person to code-switch effectively, he must control these constraints." (Gingrás, 1974: 174). He is led to this conclusion by noting that acceptability judgements may be obtained for specific code-switched sentences from code-switching users. These acceptability judgements were found to be different for bilinguals who learned a second language later in life (the "non-Chicanos" in his study) and those who grew up in a bilingual environment (the "Chicanos"). These observations suggest the possibility of a grammar of code-switching as well as possible universal constraints.

Gingrás tape recorded a set of code-switched sentences designed to test acceptability judgements, and he asked a group of 38 Chicanos and 11 non-Chicanos which sentences "sounded like something they might have heard." Some of his data show rather clearly that certain code-switched sentences are highly acceptable to the Chicano, less so for the non-Chicano; and still others may have been resoundingly rejected by the Chicano speakers, while meeting with dubious or partial acceptance by the non-Chicano. In short, there appears to be a sort of unanimity of acceptance or rejection among his Chicano sample in most cases, while acceptance among the non-Chicanos is less unanimous.

For example, sentence 5 below was chosen by 92% of the Chicano group and by only 45% of the non-Chicanos as being similar to something they may have heard before. Sentence 6, on the other hand, was soundly rejected by all of the Chicano participants, and accepted by nearly half of the non-Chicanos. Acceptance percentages are in parentheses for Chicanos/non-Chicanos respectively (Gingrás' data indicated by "G"):

5.(G)The man que vino ayer wants to buy un carro nuevo. [92%/45%]
'The man who came yesterday wants to buy a new car.'

6.(G)El man que came ayer wants John comprar a car nuevo. [0%/45%]
'The man who came yesterday wants John to buy a new car.'

In fact, in all of Gingrás' results, non-Chicano acceptance of intrasententially code-switched sentences tended in each instance towards the probabilistic figure of 50%, while Chicano judgements of the same sentences were in all cases closer to 0% or 100% acceptance.

It is not clear, however, what caused the 0% acceptance in sentence 10 among Chicano informants. One or more of sequences such as "el man", "que came", "came ayer", "wants John comprar", "a car nuevo" and so forth may have been the principal causes. An important caveat, apparently not heeded by Gingrás, is that the choice of lexical items which are code-switched is not entirely free. We have found that certain informants reject "el man" but accept "este man" (this man). Some reject "man" entirely in Spanish sentences, but readily accept "lady". It almost seems that there must be a reason for switching codes, or else it just does not work. The context of actual discourse appears to provide the type of motivation for code-switching that "example sentences" cannot.

Now, despite these problems, we believe that Gingrás' findings support the hypothesis that Chicano judgements of code-switched sentences are basically clear-cut, whereas those of the other group of non-Chicanos is less characterized by a community norm and more a case of personal preference in many cases no doubt.

Gingrás' sentences below exhibit acceptability judgements which parallel our own findings among the children:

7. G The hombre viejo is mad. [90%/27%]
'The old man is mad.'

8. G El old man está enojado. [94%/27%]
'The old man is mad.'

We are convinced, furthermore, that sentence 7 would be felt by a high percentage of those accepting it to be an English sentence with Spanish elements rather than vice-versa. Similarly, sentence 8 is a Spanish sentence with English code-mixed elements. The syntactic environments in which switching occurs in these two sentences are the same. Very similar acceptance judgements were obtained, but the slight discrepancy in acceptance by the Chicanos of the English and Spanish versions (90% vs. 94%) may be due to the tendency we mentioned earlier for more switching to occur when Spanish is being used than when English is used. Of course, again, the particular lexical items chosen may play a role in the acceptance of particular sentences.

Low acceptability percentages were obtained for sentences 9 and 10 in Gingrás' study:

9. G El man old está enojado. [5%/11%]
'The old man is mad.'

10. G El man viejo está enojado. [5%/11%]
'The old man is mad.'

Gingrás accounts for the low acceptance of 9 in this way: "In [9], there seems to be a problem in postposing an English adjective, that is, in applying a Spanish movement tranformation to the embedded English sentence," while in 10, "the Spanish transformation has been applied in the case where the head noun is an English lexical item, resulting in a fairly unacceptable sentence." (Gingrás, 1974: 172)

Our own experience is at variance, however, with Gingrás' findings for sentence 10, and we must disagree with his conclusion based upon the low acceptance of 10. We have found that certain lexical items are not generally code-switched, and "man" may be one such item for those who judged sentence 10. The use of "strip teaser" or "movie star" or "weirdo" in the same position as "man" in 10 is felt by many of our informants to be perfectly acceptable. It is indeed unlikely that all of these words have been integrated as loans into Spanish. Additionally, "old man" is a unit for some speakers, just as "hombre viejo" may be for others. In general, we find that if a noun may occur cross-linguistically when no modifiers are used, it may occur with modifiers: "El *bastard* está enojado"/"El *bastard* *feo* está enojado." (ugly)

What Gingrás is effectively saying in his explanation of the unacceptability of sentence 10 is that in all Spanish sentences where an English code-switched noun appears, there may be no Spanish modifiers. The "head noun" constraint is much too powerful, in our opinion, while the exclusion of sentences such as 11, not discussed by Gingrás, is very likely necessary.

11. *El viejo *man* está enojado.
'The old man is mad.'

In 11, the Spanish "viejo" (old) occurs in the English modifier position. In Gingrás' sentence below, it is the code-switched "old" which is in *Spanish* position with respect to the noun, and the sentence was not accepted by any of his informants.

12. G El hombre *old* está enojado. [0%/0%]
'The old man is mad.'

To summarize, in our own analysis, we have argued for the exclusion from the class of acceptable NP's, those of the following sort:

13. Spanish or English sentences:

a. *man old
b. *viejo hombre
c. *hombre old
d. *viejo man

These NP's have in common the fact that a lexical item of language X has undergone a rule of language Y. In the case of these examples of 13, it is a question of adjectival movement. If these statements amount to a constraint upon code-switching judgements and usage, then it would be predicted that the sentences of 14 should be acceptable to Chicanos, for they do not violate this constraint:

14. G a. El old hombre está enojado. [60%/0%]
b. El old man está enojado. [90%/27%]

Though Gingrás' data bear this out, non-Chicanos exhibit no tolerance at all for the code-switched adjective in 14, and the Chicanos do not appear to feel extremely comfortable with it. Again, we stress that this may be due to the actual choice of "old" as the lexical item occurring in the opposite code. We have found semantically more complex or "special" adjectives to have a higher degree of acceptability among our informants.

Gingrás states, concerning sentence 14a that "the embedded sentence is apparently English and has had an English movement transformation applied," producing "el old hombre". (Gingrás, 1974: 172). Yet he explained the cause of a "fairly unacceptable sentence" with "el man viejo" by saying that "a Spanish tranformation has been applied...where the head noun is...English." (Gingrás: 172) It seems to us that these two cases are parallel, and that a condition allowing the one cannot exclude the other--a syntactic condition, that is. Gingrás is finally led to conclude that sentences are unacceptable to code-switching users when "a movement tranformational rule of one language has to apply to a structure that has lexical items from the other." (Gingrás: 172).

According to Gingrás' formulation of the constraint, one would *not* derive "una *smart* chica" from [una chica$_i$ [una chica$_i$ es smart]], or *una chica que es smart*, but rather from [una chica$_i$ [a girl$_i$ is smart]], that is, from *una chica who is smart*. We do not question the possibility that in code-switching at some point identity between opposite language elements must occur and must be taken into account linguistically. However, his explanation entails an unnecessary complication, since code-switched adjectives are not uncommon, even in relative clauses as in "una chica que es smart". We see no reason to force the derivation of "una *smart* chica" as Gingrás recommends. He is led to this claim principally by his informants' rejection of "el man viejo", which we believe should be allowed for within the constraint of adjective-noun positioning in code-switched utterances.

We feel that the operative constraint is relevant to a much higher level of syntax, nearly surface structure. It quite simply states that *final positioning of adjectives depends upon the code of the adjective*. For the monolingual, of course, the constraint is superfluous but not false.

It is tempting to speculate on the reason for Gingrás' informants' lack of acceptance of sentences which utilize this rather simple principle. The "non-Chicanos" may have been inhibited in a broad sense from code-switching by the social situation, and possibly more specifically from *code-mixing*. *Code-changing*, which includes all *inter*-sentential code-switching as well as certain types of *intra-*sentential code-switching, seems to be more acceptable to the "non-Chicano" than code-mixing, but we have not verified this experimentally. One example of a code-change which incorporates no internal code-mix is given in 15:

15. G El hombre *who saw the accident* es cubano. [100%/55%]
'The man who saw the accident is Cuban.'

Note that for sentence 15 "non-Chicano" acceptance is quite high, 55%, and Chicano acceptance is 100%. None of Gingrás' sentences was accorded higher acceptance by the "non-Chicanos" that this one. This sentence contains a code-change, and we would predict that accordingly it should be felt by bilinguals to be neither "all Spanish" nor "all English", nor even mostly one code or the other--rather both. A major constituent has been code-switched, and grammatical reference may be made to opposite code elements "as if they were in the same code". That is, "el hombre who saw the accident" derives from [el hombre$_i$ [the man$_i$ saw the accident]] with identity between el hombre$_i$ and the man$_i$ triggering the English rule of relativization.

L. A. Timm(1975) discussed possible surface structure constraints on Spanish-English code-switching which she inferred from informants' judgements of a set of test sentences. We will summarize her five basic points and attempt to characterize her general approach.

[1] "One of the strongest restrictions against switching applies to pronominal subjects or objects (direct or indirect) and the finite verbs to which they belong." (Timm: 477) We agree that code-switching of pronominal subjects or objects alone is not acceptable, just as code-switched determiners are unacceptable.

16. a. *Yo talked with him.
    b. *I hablé con él.
    c. *Dame the pan.
    d. *Give me el bread.

Of course, at times one may observe a sequence such as "I...hablé con él." This is not a counterexample to the restriction mentioned above. Rather, the pause no doubt indicates that what follows "I" is a rebeginning of the sentence, and the subject, "yo", is merely not used---a common practice in Spanish, since the person is often unambiguously marked by the tense suffix. Such a sequence would be analogous to the false start in "Yo...I talked with him".

Timm attributes mistakes involving a violation of this constraint to the fact that the individuals are not familiar with code-switching principles. She quotes from Haugen's observations that Norwegian novelists often have misperceptions of the speech of "remigrants", creating code-switched discourse which cannot exist: "I wil seje you kan." Several additional facts are presented by Timm in an apparent effort to argue for the universality of this contraint. One observation is crucial. Speaking of "haphazardly" switched texts used to compare bilingual versus monolingual reading speed by P. Kolers (1965), Timm suggests that "it might be argued that inappropriate switches in the test materials played a certain part in the slower reading rates reported for bilingual over monolingual texts." (Timm: 481)

We feel that universals in the grammatical description of code-switching are probably not of the sort that Timm's first constraint entails. There are many variables involved in attempting to state a universal principle with regard only for "subject pronoun" and "verb" and so forth. We are acquainted with a Chinese-Thai-English trilingual who commonly uses the Chinese word for the subject pronoun "you" when speaking to other Chinese-Thai bilinguals in Thai. It may be that the social significance converyed by the use of the Chinese "you" is a desirable feature, and its use may be parallel to the use in Thai of many forms of the word "you", depending upon various social factors. Among Chinese-Thai bilinguals, the Chinese pronoun may be one choice from a long list of alternates already established in Thai for denoting certain speaker-addressee relationships. In this case, the Chinese "you" may be the most appropriate means of acknowledging the addressee's bilingualism and common cultural experience.

This is specualtion, of course, but we must be very careful about claiming a particular phenomenon in Spanish-English bilingualism to be universal, since the roots of code-switching are in the culture and the languages of only two social groups.

In sentence 17, the unacceptability is produced by the use of Spanish pronouns as the object:

17. {*She sees lo / *She lo sees} nearly every day.

In 18, a similar cause is the reason for the unacceptable Spanish sentence:

18. {*Ella ve him / *Ella him ve} casi todos los diás.

Neither English nor Spanish placement of the clitics in either case is possible. Our position on the matter is the following. What has been violated is not a constraint against opposite language object or subject pronouns, but a very general condition which requires all grammatical "function" elements such as determiners, pronouns, and verb tense to be in the same code---unless a code-change takes place. What has happened in 17 and 18 is that a code-change has been attempted, but a major constituent has not been code-switched. Code-mixing techniques have been applied, furthermore, to an element which just is not code-switched for the same "nebulous" reasons that many nouns are not used in opposite language sentences. We wish purposely to characterize sentences 17 and 18 as essentially "non-sentences" of Spanish, English or any combination thereof. THey violate not only the social motivation for code alternation in the first place, but also the limits of both code-changing and code-mixing.

It 16a and 16b, on the other hand, an entire constituent--the subject--occurs in one code, and the verb phrase in the other. We would say that a code-change occurs after the subject NP. We predict that the sentence should be perceived as neither Spanish nor English but as a sentence which starts in one code and changes to the other. However, as we have observed, it is no doubt the case that such sentences as 16a and 16b are generally perceived as unacceptable. The question is "Why?".

In a nutshell, we believe that 16a and 16b are rejected simply because the point of code-change comes too soon in the sentence. That is to say, the portion which occurs in the language which initiates the sentence just is not "long enough". The purpose of a code-change is not to mix portions here and there, but to "change" grammatical gears, as it were. Additionally, there is apparently no real social motivation for, or significance attached to, the practice of code-switching subject pronouns along. In a sense, there is no reason to code-switch this element; nonetheless, there is no firm syntactic constraint against the use of one code for the subject pronoun and the other code for the verb phrase, as is evidenced by our informants' acceptance of 19a:

19. a. Yo, el mejor de todos los boxeadores del mundo, challenge you to fight.
'I, the best of all the boxers in the world, challenge you to fight.'

but b. *Yo challenge you to fight.

Speakers reject "challenges" in 19a, indicating that "yo" is very probably being used as the subject of "challenge" rather than "el mejor...".

Timm uses informants' rejection of sentences, or parts of sentences, such as the following to support her constraint: "*Yo went; *el wants; *ellos gave; *I fui; *he quiere; *they daban". The problem with these pairs is simply that they each represent a sentence (or partial sentence) which begins in one code and ends--one word later--in the other code. People just do not do this. On the other hand, "the campanita; those piñatas; a rojo" are all noun phrases of English with code-mixed nouns, while "poquita paste; mi nephew; una mas cookie" are Spanish NP's.

When the code is changed intra-sententially, the impression is given that as a sentence it is neither all Spanish nor all English. We feel that we have evidence from experimental data to support this claim, and it will be presented later in this chapter. A sentence such as "*I fui" (I went) seems to merely serve to confuse a listener as to why a code-change would occur within such a simple utterance, though we hasten to point out that this is a very difficult concept to state with any precision.

[2] "A second restriction blocks switching between finite verbs and their infinitive complements." (Timm: 478) Timm's informants rejected

"*they want a venir" and "*I'm going a decidir" along with "*quieren to come" and "*voy to decide". We agree that such sentences should be excluded. The problem, as we see it, is that the complementizer "to" or "a" is not in the code of the element which determines its use or non-use: the verb which she refers to as "finite". Of course, the same phenomenon occurs when the infinitive is used as the complement of another infinitive:

20. *Voy a tratar to decide.

21. *I'm going to try $\left\{\begin{array}{l}\text{de}\\ \text{a}\end{array}\right\}$ decidir.

Concerning the use of opposite language infinitives with the complementizer in the code of the verb form which determines it, Timm states:

> "It is interesting to note that while a S S E sequence (*voy a decide) was judged inappropriate, the sequence E E S was accepted as possible, though not tasteful; test sentences responded to in this way included (they) want to venir and (I'm) going to decidir." (Timm: 478)

Of course, "venir" and "decidir" may be the wrong verbs to try this with, but our experience was exactly the opposite of Timm's. That is, "voy a decide" was accepted by our adult informants, but "*I'm going to decidir" was rejected. These are no doubt social intuitions rather than linguistic ones at work. The same individual who rejected the latter sentence accepted "I'm going to horniar the roast." (...put in the oven...) Apparently, if the verb is too easily translated, this speaker prefers not to code-switch. Also, as we have said before, our experience has been that English elements in Spanish sentences are much more common that vice-versa--this may be partially responsible for our difficulty in finding Spanish infinitives which are acceptable in English for certain informants.

As a syntactic principle, however, we feel that non-finite verbs must be allowed as a code-mixing type. The complementizer must be selected on the basis of the co-occurrence restrictions of the higher verb. The use of a code-mixed infinitive does not change the code of the sentence.

Examples of this type of code-switch will be given from our own as well as from Lance's and Pfaff's data. First, let us proceed to Timm's third constraint and our analysis.

[3] "Verb phrases containing auxiliaries and main verbs are normally only in unilingual constructions." (Timm: 478) Judged as aberrant by her informants were the following:

22. T a. *I must esperar.
b. *He has visto.
c. *I was caminando.
d. *Debo wait.
e. *Ha seen.
f. *Estaba walking.

Our data, and those of many writers on the subject, contain examples of the present progressive tense in Spanish or English in which the present participle occurs in the opposite code (cf. 26c, 26f). A few of these are given below:

23. It sounds funny when you're grabándolo
'...recording it.'

24. ¿Cómo se llama la señora que estaba teaching us el año pasado?
'What's that teacher's name who was teaching us last year?'

25. Estaba training para pelear. (Pfaff, 1975)
'He was training to fight.'

The informants in Timm's study apparently have a very interesting restriction on the use of constructions such as those in 23-25. They allow only participles which contain English loanwords as stems: "he was wachando; they were chopeando" and so forth, from "watch" and "shop". Timm speculates that "the effect of such loans--and there are hundreds of them in Southwest Spanish--is to diminish, for some speakers, the perceived structural 'distance' between the two languages." (Timm: 479)

One is immediately struck by the possibility that these speakers are not judging "I was caminando" (26c) solely on the basis of its being grammatically anomalous, since the morphological form of the Spanish present participle may in fact occur as in "they were chopeando." We would expect a grammatical constraint to be operative independent of the particular lexcial item, or not at all. One not-so-pleasant analysis is that participles are permitted as code-mixes, but if they sound "too Spanish" they are rejected in English sentences. Socio-cultural linguistics strikes again.

Although we have no first hand knowledge of her informants' background, it is interesting and useful to speculate on the cause for such a restriction in the use of present participles. They may have sensed the nature of the situation in which they were tested to be one in which they were to provide "correct" responses. It is possible that they may have used certain code-switching restrictions to reflect their deep knowledge of Spanish and English in a subtle subconscious way. It is likely that such devices are learned within the context of a bilingual community for the purpose of communicating such things as degree of sophistication, education, and affect for the languages being used. Such restrictions are an advanced stage of stylistic use of code-switching which are not fully developed among children of the age we worked with.

[4] "A fourth obstacle to Spanish-English switching is posed by the negation of verbs: i.e., the negating elements in each language must correspond in code to the verbs undergoing negation." (Timm: 479) Sequences such as "*yo not quiero" and "*I no want" are thus ruled out. This, we believe, is

essentially correct, but we would prefer to include the negation--provided that it is the verb that is negated--as part of the verbal morphology, and it would therefore have to be in the code of the verb tense. "*I no want", if it occurs, is an example of interference of the Spanish paradigm, and not an example of code-switching. The "no" may in fact be the *English* word, and not the Spanish negation in examples we have noted among the children.

[5] "The final restriction on switching affects noun phrases; it is somewhat more flexible, however, than the preceding four, since switching is permissible within certain types of NP's." (Timm: 479) She speaks of "three element" noun phrases and prepositional phrases in terms of SSE, ESS, SES sequences and so forth. We view the data in a very different way.

We have extensively discussed code-mixing in the noun phrase, and we will apply our previous analysis technique to a summary of Timm's findings. In 26 we have listed all of the NP's rejected by her informants, and in 27 we have cited those which were either accepted or "thought possible but not good". (All examples from Timm, 1975)

26. a. *su favorito *spot*
    b. *su *favorite* lugar
    c. *su *spot* favorito
    d. *his *favorito lugar*
    e. *his *favorito* spot
    f. *his *lugar* favorite
    g. *his spot *favorito*

27. a. his favorite *lugar*
    b. his *lugar favorito*
    c. su *favorite spot*

Timm does not indicate which language the sentences containing these noun phrases were in, so we will assume that those using "his" were in English sentences, and those using "su" occurred in otherwise Spanish sentences. If this is not the case, then we are no longer dealing with a *code-mix*, but a *code-change*, and often code-mixing within a code-changed portion of a sentence is not accepted.

Now, 27b and 27c indicate that adjective-noun combinations may occur in the opposite code. Adjective placement is according to the adjective's code. 27a is simply a code-mixed noun in an English sentence, but the same type is not permitted in Spanish sentences (cf. 26c). Again, this is exactly the opposite trend exhibited by our subjects. The unacceptability of 26b and 26g means that code-mixing of adjectives in English or Spanish sentences is not tolerated by these informants. The rest of the examples should be rejected by most bilinguals for reasons discussed previously.

Casting aside the lack of symmetry where sentences of Spanish or English are concerned, we could say that Timm's informants permit code-mixed nouns, but reject code-mixed adjectives, unless the noun has been switched also. We emphasize that we have not related these examples to usage in sentences such as those of 28, where code-changing occurs:

28. *?He went to su favorite spot. (cf. 27c)
*?El se fue a his lugar favorito. (cf. 27b)

But the sentence is destroyed by the fact that the code-change contains a code-mix. This degree of code-switching does not seem to be analysable by speakers, and it gives the impression that only the possessive adjective has been switched---an unacceptable move.

5 Testing Children for Code-Switching Acceptability

We constructed a set of 29 sentences containing a wide variety of code-switches, both correct and incorrect, and read each one to a child asking him first to repeat the sentence, then to go into the next room and repeat it to another researcher. All of this activity was tape-recorded.

Only the second repetitions following a short period of delay, during which the child was walking into the next room were used in tabulating the data. We expected that each of the 20 children participating would reprocess the sentences to conform with his or her own rules for code-switching during this period. We make several implicit assumptions concerning the productin of responses by the children. First of all, we assume that a correct, or word for word, repetition of the original sentence may indicate that the sentence in acceptable. The possibility of a child's being able to "repeat the sentence exactly as it was given" does exist, despite the fact that the sentence may not have been one that he would independently produce. However, a high percentage of "correct" repetitions among the children should indicate that the sentence is not a severe violation of the grammar of the majority of the children. Secondly, "incorrect" repetitions, those which differ from the original sentence, may be acceptable sentences for the child producing them. Again, a high percentage of similar responses which depart from the original will be taken as an indication that the particular change involved is very likely representative of a better construction in their grammar.

In addition, sentences which produced a large number of variations among the children in their responses which depart from the original will be the most uncharacteristic of good code-switching. Changes in vocabulary are not considered to be departures from the original sentence, except when the change involves a change to the opposite code. That is, if the sentence contained "The mujer....", and "The muchacha....." was used, the repetition is considered to be "correct".

The children were not asked to correct the sentences, only to repeat them exactly as they had heard them. The use of control sentences of similar length in Spanish and English indicated to us that changes were often made by the children to adjust what they had heard to their own dialect. "He's got a book", for example, nearly always is repeated as "He gots a book." "Voy a ir a la escuela" very often becomes "Voy a ir para (pa') la escula." (I'm going to go to school.)

Sentences 29-30 are simple noun code-mixes in Spanish sentences:

29. T Ella me dio un wagon azul en la mañana. [17/19]
'She gave me a blue wagon in the morning.'

30. T Mi hermana me dio una cracker. [18/18]
'My sister gave me a cracker.'

"T" indicates that the sentence was a test item. Numbers on the right are the fraction of those responding who produced the underlined portion in their response.

"Incorrect" repetitions of 29 included: un blue wagon; un wagon, each by [1/19]. Counted as correct was: un new wagon azul [1/19].

In 30, un cracker was used by [6/13] and una cracker by [12/18]. As we have said, both types of response are tabulated as "correct", since the code of the elements was not changed.

Much may be learned about the code-switching patterns of this sample of children from just these two sentences. Sentence 29 shows us that code-mixed nouns are probably acceptable to most in Spanish sentences, even though an adjective of Spanish occurs in the NP. Only one child changed the adjective to English, un blue wagon, but of course he also moved it. The likelihood that both English and Spanish adjectives may be so used in their respective positions is at least suggested by one child's use of un new wagon azul.

In 30, we see evidence of the assignment of "no gender" to code-mixed nouns in Spanish sentences. Un cracker was used by [6/18] despite the fact that the children do know the equivalent Spanish term "una galleta" which is feminine. Note, however, that none of the 19 children responding to sentence 29 used the feminine "una" with wagon. Our recorded data of naturalistic discourse seems to indicate that English nouns with Spanish equivalents which are feminine (inanimate nouns) may be used in Spanish as if they were masculine. However, feminine gender assignment does not seem to occur with English lexical items unless their equivalent is clearly feminine in Spanish. That is, if "*una* knife" were to occur, it would probably mean "a pocket knife" (*una navaja*) rather than a larger type of knife which is *un cuchillo* in Spanish. This principle of using the masculine as a sort of "unmarked" or non-gender, is reminiscent of the manner in which romance languages generally treat nonce-borrowings. The sentences below are typical of those in our data:

31. a. A mí me gusta *el potted meat*. (meat=*la carne*)
'I like potted meat.'

b. Tú tienes la mano en *la shirt*. (shirt=*la camisa*)

It will be useful to note here some of the changes the children might have made in 29 and 30 but did not make. In 29, no one used the Spanish noun "camioneta" for *wagon*, or "galleta" for *cracker* in 30, although they know these words in Spanish. Nor did any of the children change the code of the determiner, as in "a wagon" or "a cracker". We feel that the obvious has been demonstrated experimentally; namely, that the noun is the most easily code-switched element.

Now consider the following test sentences which add complexity to the matter.

32. T a. The bird made *un nido*. [12/20] 60%
'The bird made a nest.'

b. El hombre quemó *the papers*. [8/19] 40%
'The man burned the papers.'

33. T a. *The girl* le pegó a su hermano. [14/17] 80%
'The girl hit her brother.'

b. El ratón chewed the table. [16/17] 95%
'The mouse chewed the table.'

The fraction of the sample in each case which produced the underlined portion has been converted to approximate percentages, since the number of responses varies. At first glance, one might say that in all four sentences above, an NP has been code-switched. In 32a,b it would seem that the object NP is the switched element, and it is the subject NP in 33a,b which has been switched. However, we have chosen another approach to these four sentences. As we have said, a code-change is marked by a difference in the code of elements which have a grammatical function within a sentence or between two sentences. The code-changed portion is a full constituent. In all four sentences above a determiner is in the opposite code of the verb tense. We believe that these sentences were perceived by the children in the following way. In 32a a code-change to Spanish occurs. The code-changed constituent is the object NP. In 32b, the only difference is that the code-change is to English. In 33a, a code-change to Spanish occurs, and in 33b the code-change is to English. However, in 33a and 33b the constituent which is code-changed is the verb phrase, which includes the object NP. These four sentences are not sentences of Spanish or English, uniquely, but rather combinations of both which start in one code and proceed in time, or from left to right, to change from one code to the other.

Now let us consider the ease with which these children repeated the four sentences. While the differences between the percentages of 32a,b and 33a,b are not so striking as to indicate that code-changing of the object NP is impossible and changing the code of the VP totally natural, there is an interesting discrepancy between the 60%-40% of correct repetitions of the former, and 80%-95% in the case of the latter. It is possible that a "longer" object NP would have been more acceptable as a code-change, and it is also possible that the point of change is less acceptable than the point of change in 33a and 33b. In the case of 33a,b the sentence is essentially changed in code at a major constituent break, whereas in 32a,b a major constituent has been broken up by the code-change. The "incorrect" repetitions all involved one of two types of changes in the original sentence: (1) the use of the determiner of the same code as the verb tense, which converts the sentence to a "sentence of" Spanish or English, and makes a code-mix of the code-switched noun; (2) the use of an entirely Spanish or English determiner and noun in the language of the verb tense, resulting in a completely English or Spanish sentence. None of the children erred by changing the code of only the noun as in "The bird made un nest"; "El hombre quemó the papeles" and so forth. Rather, "mistakes" were of the form "The bird made a nido" or "El hombre quemó los papeles." Only one child changed a verb to the opposite code: "El raton comio el table." (cf. 33b) This change makes a Spanish sentence out of the original, and incorporates an English code-mix, table.

We conclude from these data that code-changing, while not impossible at the object NP, is maximally acceptable at the VP. We will now examine some extremely unlikely sequences and discuss the ability of the children tested to repeat them. Consider sentences 34-37 below:

34. T The mujer cortó the bread. [3/18] 15%
'The woman cut the bread.'

25. T La cow ate el grass. [2/17] 10%
'The cow ate the grass.'

36. T The gato rasguñó the muchacho. [2/18] 10%
'The cat scratched the boy.'

37. T El teacher painted una door. [8/19] 40%
'The teacher painted a door.'

The percentages indicate the portion of the sample responding which did not change the code of the underlined elements, nor the code of the verb. These sentences were among the most difficult for the children to repeat, and they produced the greatest number of variations from the original sentence. Yet they are short sentences, and one might have expected that sheer memorization would have played more of a role.

Sentence 34 begins with an English NP, the mujer, but has a code-mixed noun mujer, and then apparently changes to Spanish for the verb--an acceptable point of code-change. But then another change in code occurs at the object NP, the bread. This much changing and mixing of codes simultaneously is not permitted, it would seem, by the children, nor is it observed in their discourse. This sentence should probably be relegated to the scrap heap of "non-sentences"; Spanish, English, or code-switching. The "incorrect" responses given by the children fall into several distinct classes. These responses and corresponding percentages of the remaining 15 of 18 children responding are given in 38:

38. Variations in Responses to Sentence 34

a. Original Sentence: The mujer cortó the bread.
b. C.C. at Ob. NP : La mujer cortó the bread. [5/15] 30%
c. C.C. at VP w/2 CM: The mujer cortó el bread. [3/15] 20%
d. C.M. only/Sp. S. : La mujer cortó el bread. [4/15] 25%
e. C.C. at VP and Obj. NP: The girl cortó the bread. [2/15] 15%
f. C.M. only/Eng S. : The mujer cut the bread. [1/15] 05%

In 38b, there is a code-change at the object NP. The first code-change at the VP has been corrected by these children. In 38c, the code-change is at the VP, but the other code-change in the original--at the object NP--has been converted to a code-mix: el bread. In 38d, there is only a code-mix in a Spanish sentence, again el bread. In 38e, two code-changes occur--at the VP and Object NP--but the code-mix has been done away with, and the girl is used instead of the mujer. In 38f, a code-mixed noun, mujer, occurs in an English sentence. Compare this usage with that in 38d. Only one child did this, and it was done simply through the changing of the verb to English cut. None of the children said "The girl cortó el bread.", which we would predict to be a possibility. That is, it would be a code-change at the VP, and a code-mixed noun bread.

Now all of these variations have in common that a code-mix and two code-changes are not accommodated in the same sentence. The most popular responses utilized only one code-change, or none at all--only code-mixes.

Sentence 35, "La cow ate el grass" is a classic. Among the 17 children responding with a "repetition", there were ten variations. Of course, 35 is another "non-sentence". The question is "Why" A superficial examination of this sentence might tempt one to merely say that the determiners have been code-switched, and that there is a restriction against this. However, we are concerned with explaining why this sort of restriction causes such difficulty in repeating such a simple sentence. Again, there were interesting solutions offered by the children to the problem of remembering an impossible sentence. These responses are given in 39:

39. Variations in Responses to Sentence 35

a. Original Sentence: La cow ate el grass.
b. C.C. at VP w/1 CM: La cow ate the grass. [4/15] 25%
c. All English : The cow ate the grass. [8/15] 50%
d. C. C. at Ob. NP w/1 CM: The cow ate el grass. [3/15] 20%

All other responses were analogous to those given above where code selection is concerned, but vocabulary varied. "La cow ate all grass", for example, was counted as type 39b.

The original sentence, 35, is similar to 34, except that 35 has two code-mixes as well as two code-changes. La cow is a Spanish NP, with an English code-mix. The code-change at the VP, ate el grass, is followed by another code-change at the object NP, el grass. To make matters even worse, this NP contains an English code-mix, grass.

We have a feeling that the problem with stating that two code-mixes and two code-changes is somehow beyond the limit of processing capabilities of the bilingual is similar to the problem in stating that a certain number of self-embeddings in English causes processing problems: some speakers are more talented than others in this area. We therefore will merely point out what we believe has caused these children difficulty in repeating sentence 35, without attempting to impose this limitation upon all speakers' competence.

Sentence 36 is essentially the converse of 35. The English determiners are in what might appear to be a Spanish sentence, though of course, it is a "non-sentence": "The gato rasguñó the muchacho." Only two of eighteen responses contained both English determiners; as in nearly all instances two of the children did not respond, and so the total responses numbered only 18. Of the 16 remaining responses, two basic types emerged. These are outlined in 40:

40. Variations in Responses to Sentence 36

a. Original Sentence : The gato rasguñó the muchacho.
b. C.C. at VP w/CM : The gato rasguñó al muchacho. [7/16] 45%
c. All Spanish : El gato rasguñó al muchacho [8/16] 50%
d. C.C. at OB. NP w/CM : El gato rasguñó the muchacho. [1/16] 05%

The third type of variation, 40d, was rare. It represents a code-change at the object NP which in turn contains a code-mixed noun muchacho. In 40b, a code-change occurs at the VP, and the subject NP, an English NP, contains a Spanish code-mix, gato. The determiner in the object NP has been made Spanish, eliminating a code-change. In 40c, fully half of the children who did not repeat the original exactly simply made an all Spanish sentence of the original sentence. Of course, 40b is also a "sentence of" Spanish.

Sentence 37, "El teacher painted una door" is syntactically parallel to 35, "La cow ate el grass." Yet 40% of the children were able to repeat 37 "correctly". Other popular responses are given in 41:

41. Variations in Responses to Sentence 37

a.	Original Sentence	:	El teacher painted una door.		
b.	C.C. w/1 CM/Ob NP	:	The teacher painted una door.	[2/11]	20%
c.	C.C. only/Obj NP	:	The teacher painted una puerta.	[2/11]	20%
d.	C.C. at VP w/CM	:	El teacher painted a door.	[2/11]	20%
e.	All English	:	The teacher painted a door.	[4/11]	40%

One child, in addition, said "The teacher painted the paisaje (landscape)". We have no good explanation for the high percentage of correct repetitions as compared to those for 35. However, a careful listening to the tapes of this item reveals that at least three children said what sounds like "un ador" for "una door". El teacher may not necessarily be a code-mix, if "teacher" is not firmly a lexical item of English, but often borrowed. Then, we would have a situation as in 38e, where two code-changes leave only the verb in the opposite code. Finally, there is always the possibility that for some unknown reason more children were able to memorize this sentence, and there may be no significance to that fact.

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41. Variations in Responses to Sentence 37

a. Original Sentence : El teacher painted una door.
b. C.C. w/1 CM/Ob NP : The teacher painted una door. [2/11] 20%
c. C.C. only/Obj NP : The teacher painted una puerta. [2/11] 20%
d. C.C. at VP w/CM : El teacher painted a door. [2/11] 20%
e. All English : The teacher painted a door. [4/11] 40%

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The following three sentences deal with color adjectives:

42. T La senora lleva un blue vestido. [19/20] 95%
'The lady is wearing a blue dress.'

43. T El muchacho tiene un carro red. [18/20] 90%
'The boy has a red car'

44. T My brother gave me una verde shirt. [4/17] 25%
'My brother gave me a green shirt.'

In 42 and 43, blue and red are code-mixes in Spanish sentences. No one changed the placement of blue in 42, while in 43 two variations were given. These are shown in 45:

45. Variations in Responses to sentence 43

a. Original sentence : El muchacho tiene un carro red.
b. C.C. at VP : El muchacho got a red car. [1/2]
c. All Spanish : El muchacho tiene un carro colorado [1/2]

The 90% repetitions of 43 seems to contradict our earlier restriction on the placement of adjectives. That is, we indicated that they are usually placed in accordance with the movement rules of the code of the adjective. There seems to be little trouble with un carro red in 43. We are convinced that this is simply because the adjective in question is a color term. The only variation from un blue vestido in 42 was un blue dress by one child.

Color adjectives of English seem to be able to be used as Spanish adjectives in certain situations. It no doubt is also the case that much depends upon the particular lexical item for each child. As we have pointed out earlier, where common color terms are concerned, these children may have a merged semantic system, and phonological adaptation may be subtle or nearly non-existent when English adjectives are used in Spanish sentences. Nonetheless, adjectives such as "interesting, happy, fantastic, ugly, smart, groovy," etc., are generally used in English position by the children in Spanish sentences, with no adaptation.

In sentence 44, a code-change occurs at the object NP. This NP contains the code-mix shirt which has the modifier verde in English position. In principle, this sentence is not grammatical, but the color adjective may for some children make it a bit better. As we have said, a code-change in the object NP is not maximally acceptable for these children, and only four of them managed to use the Spanish article with the English verb. Nearly fifteen variations in all were tabulated. Some used "uncle, father" or "new brother" as the subject, and a wide range of adjectives showed up with shirt: "new verde", "new", "green", "great", "grey", "reddish", "red". Code variations are given in 46:

46. Variations in Responses to sentence 44

a. Original Sentence : My brother gave me una verde shirt.
b. CM Adj in Eng Position : My brother gave me a verde shirt. [2/13]
c. All English : My brother gave me a new (green, etc.) shirt. [9/13]
d. CM Noun (Spanish Sent) : Mi hermano me dio una verde shirt. [2/13]

Essentially, most children changed the original sentence to a sentence of English. This includes 46b and 46c--11 children in all. Only two remembered the sentence as being a sentence of Spanish (cf. 50d), yet this is some evidence at least that the original sentence, 44 is ambiguous as to whether it is "Spanish" or "English". The code-change is responsible for this ambiguity.

We have been trying to demonstrate how our use of the notions "code-mix" and "code-change" can be used in an explanation of complexity where our data appear to indicate that a large number of the bilingual children in our sample had difficulty in memorizing and repeating a particular sentence. Sentence 35 is perhaps one of the best examples of a high degree of complexity where code-switching is concerned in a short sentence. Superficially, it is apparently very simple. That is, only the determiners appear to have been code-switched. According to our approach, however, sentence 35 contains two code-mixes and two points of code-change. If a strategy were available to the bilingual for viewing sentence 35 as having two simple lexical items code-switched--the determiners--then one would expect great ease in memorizing. Stating that a single constraint has been violated does not seem to capture the high degree of complexity represented by sentence 35. In other words, we are saying that a theoretical model of the bilingual approach to understanding bicodal sentences is possible. Such a model must be capable of characterizing both unaccaptability and complexity.

The next set of sentences involves the use of opposite language verbal elements. There are many combinations of code-changes and code-mixes:

47. T Ya has broken tus new toys. [16/20] 80%
'You've broken your new toys already.'

48. T Have you visto my new car? [17/18] 95%
'Have you seen my new car?'

49. T Yo estoy playing with her pelota. [11/14] 80%
'I am playing with her ball.'

50. T She is comiendo with una azul cuchara. [9/13] 70%
'She is eating with a blue spoon.'

51. T My dad me ha fixeado this truck. [9/16] 55%
'My dad fixed this truck for me.

In sentence 47, there are two code-mixes: broken and new toys. The use of the code-mixed past participle presented no great problems for these children. Sentence 47 is a sentence of Spanish, and sentence 48 is a sentence of English with a similar participle code mix. The main verb tense in each case, and the articles or possesive adjective determine the code of the sentence or constituent.

Sentence 47 contains a code-mixed adjective and noun in the object NP, while 48 does not. All four of the children not counted under the 16 correct repetitions of 47 changed ya has broken to "you have broken". This is important to mention, for it is obvious that these children understood what the meaning was. For sentence 48, no one said "has visto" for have you visto. Only one child changed have you visto to "have you seen". Interestingly, this child must have remembered that there was something Spanish about the sentence, and he employed a code-change at the object NP, with a code-mix in the object NP: "Have you seen mi new car."

Sentence 49 contains a code-mixed present participle, a code-change at the prepositional phrase, with her pelota, and a code-mix in the prepositional phrase, pelota. The figures given reflect only those who correctly repeated yo estoy playing [11/14]. The code change at the prepositional phrase was not done by [5/14]. These children said either "Yo estoy playing con su pelota" [2/14], or "Yo estoy jugando con su pelota" [3/14]. Both variations are sentences of Spanish rather than code-changed sentences. An unexpected type was given as a response by one child: "Yo estoy playing with su pelota." [1/14] This is a code-change within the prepositional phrase. Another explanation is probably more likely. "Playing with" almost surely is a unit for this child -- "su pelota" is simply the object NP -- no code-change takes place.

In sentence 50, a code-change within the prepositional phrase was forced upon the children. Only [3/13] children used with una...cuchara. However, the code-mixed present participle was no great obstacle: She is comiendo was repeated by about 70%, or [9/13]. Of these [9/13] who did use the Spanish participle, [6/13] said either "....con una cuchara", "with one cuchara", with various combinations of azul and blue which caused much confusion in this sentence, probably because of the placement of azul.

Now these two variations are simplifications of the original use of code-mixing. This is because the code-change subsumes a larger constituent than in the original, in the case of "She is *comiendo con una cuchara*." In the latter case, there is no code-change: "She is *comiendo* with one *cuchara*, only the code-mixed *cuchara*, and of course, *comiendo*. As we have seen many times, these children tend to alter the sentences in their repetitions in the direction of less complexity of code-switching.

Though we will discuss the subject more fully later, it should be said at this point that there is some evidence in these data and in natural discourse that a code-mix may often "trigger" a code-change. This fact is responsible for much of what has in the past appeared to be "random code-switching". If, for example, we observed "She is *comiendo con una cuchara*" in natural speech, we would analyze this as not one but two code-switches: *comiendo*, code-mix; and *con una cuchara*, code-change, which may be a result of interactions with the initial code-mix.

We obtained 16 responses for sentence 51, and nearly as many variations. Note that the entire verb and object pronoun are in Spanish. This sentence contains two code-changes: one at the VP and one at the object NP. However, one additional feature has been added. The past participle *fixeado* is an English stem with a Spanish suffix. This is not an integrated borrowing for these children, especially since we pronounced "fix" with an English vowel: [fIkseado]. This caused much confusion and essentially destroyed the usefulness of this particular test item.

Sentence 52 is similar to 51 in that two changes in code are necessary to produce it.

52. T Algunos de sus primos *played* con él. [11/18] 60%
'Some of his cousins played with him.'

Only two variations were observed. The first eliminated one code-change, the one occurring at the object NP: "Algunos de sus primos played with him." The second did away with both code-changes by using a Spanish verb: "Algunos de sus primos juegó [sic] con él." The correct verb would be "jugaron".

An interesting case of a code-mix possibly triggering a complete code-change intra-sententially may be the explanation of some alternates given by the children in responding to test item 53 below:

53. T Put your mano on the mesa. [12/19] 65%
'Put your hand on the table.'

Sentence 53 contains two code-mixes mano and mesa. We would have expected a much greater percentage of correct responses for such a simple code-switch combination. We should look, however, at the variations in responses to find out what happened. These are outlined in 54 below:

54. Variations in Responses to sentence 53

a. Original sentence : Put your mano on the mesa.
b. CM and CC at Prep Phr : Put your mano en la mesa. [8/9] 90%
c. CC within Prep Phr & CM : Put your mano in la mesa. [1/9] 10%

The variation represented by 54b is a code-mix, mano, in what starts out to be an English sentence, but the code of the sentence is changed at the prepositional phrase. We might say that this code-change is triggered by the two code-mixes. 54c is a step up in complexity, and is in fact possibly a sentence of very low acceptability.

In an attempt to force the children into using a code-change immediately following a code-mix, to see if the triggering mechanism actually worked, we used the following sentence:

55. T I got a bicycle roja para mi birthday. [7/18] 40%
'I got a red bicycle for my birthday.

Note however, that *birthday* occurs as a code-mix within the Spanish prepositional phrase. Only 7 of the children used *para mi birthday*, while [8/18] said *for my birthday*. Apparently, triggering of the sort we mentioned is most relevant where no code-mixes are involved in the code-changed portion. That is, "I got a bicycle *roja para mi cumpleanos*" may be easier for these children to remember than sentence 55, though we have not tested for this particular point.

The rest of the sentences which we will mention here deal with close knit units involving quantifiers and prepositions. These sentences are all ill-formed, we believe, and they should give various degrees of difficulty in repetition. None should be extremely easy to repeat.

56. T Pocos *of the* muchachos fueron a la escuela hoy. [4/15] 25%
'Few of the boys went to school today.'

57. T Pocos de *your* vasos *are* quebrados. [1/12] 10%
'Few of your glasses are broken.'

58. T Many *de los vecinos* work in the nursery. [3/16] 20%
'Many of the neighbors work in the nursery.'

59. T Algunos de *his* amigos came tarde. [6/17] 35%
'Some of his friends came late.

Sentence 56 *looks like* a sentence of Spanish, but one determiner is in English. A code-change seems to have occurred at the prepositional phrase: *of the muchachos*. This makes *muchachos* a code-mix. Then a code-change at the verb phrase: *fueron a la escuela hoy*. All [11/15] of the other children made the sentence entirely Spanish in one way or another, which very likely reflects their having perceived sentence 56 as a "sentence of" Spanish in the first place, rather than a series of code-changes and a code-mix.

Number 57 was even worse. Only on child repeated it exactly. Eight of the twenty tested could not remember the sentence at all. In 57, there must be a code-change at *your vasos*, since elements such as *your* (including possessive adjectives, demonstrative adjectives, pronouns, verb tense, and determiners) cannot be code-*mixed*. *Vasos* is then a code-mixed noun in an English NP: *your vasos*. This NP is in turn a code-changed (English) constituent of a prepositional phrase which begins in Spanish: "*de your vasos*." At this point, we are theoretically "speaking English": "Poscos de *your vasos*..." We have changed from Spanish to English once. We should expect an English verb, and that is what was used: *are quebrados*.

But only one child repeated the sentence exactly as given in 61. In fact, he was the only one to correctly say "*Pocos de your vasos*." There is obviously something very wrong with this phrase. Variations in responses are given in 60:

60. Variations in Responses to Sentence 57

a. Original Sentence : Pocos de *your* vasos *are* quebrados.
b. All Spanish : Pocos de tus vasos están quebrados. [4/11]
c. CC at PP & 2 CM : Pocos *of your* vasos *are* quebrados. [3/11]
d. CC at PP w/CM & CC at VP: Pocos of your vasos están quebrados. [4/11]

If our "triggering" principle exists as a device in code-switching, it may account for the code-change at the VP in 60d, especially since the code-mixed *quebrados* was used. Compare 60d and 60c. They differ essentially only in this regard, ie. one code-change. We emphasize that neither is probably a very acceptable sentence. One point, moreover, has been made. A code=change *within* a prepositional phrase is probably *worse* than a change *at* the prepositional phrase.

Be that as it may, the quantifier seems to permit only marginally a code-change at the ensuing prepositional phrase. Sentences 58 contains such a code-change. Only [3/16] of the children were comfortable enough with *many* de los vecinos to have repeated it. Most made an English sentence out of it: "Many (of the) vecinos work in the nursery" [11/16], with a single Spanish code-mix, or no code-mix at all: "Many friends work in the nursery." [2/16]

Although [6/17] of the children did repeat sentence 59 as given, we noted severe parsing at algunos de...his amigos, or actual phonological adaptation of his: [his]. We feel, consequently, that the figures in this case do not mean too much. [10/16] children said essentially "Algunos de sus amigos came tarde" using what seems to be a code-change at the VP, and a code-mixed adverb. One child said "One of his amigos vinieron [sic] tarde." This is more or less the opposite of the preceding variation. One of his amigos is an English NP with a code-mix: amigos. A code-change occurs at the VP: vinieron tarde. The original sentence in 59 is very similar to 61, yet there is a fairly large difference in the percentages: 10% vs. 35%. It is difficult to know why, but it may be that as we mentioned a special memory aid such as parsing or adaptation occurred, or as was suggested previously a particular lexical item may be in a grey area as far as absoluteness of code;;in this case amigo may be less of a switch in code than vasos was in 57. We are not terribly comfortable with the notion of "degree of switch" for particular lexical items, but it would seem to tie in with much of what has been observed in the case of the class of color adjectives. They seem to behave at times as if they were not strongly one code or the other, depending upon individual children.

We have tried to characterize "unacceptable" code-switches as complex. That is, sentences which have undergone two or more changes in code, particularly where (1) only a few words are code-changed and (2) where the code change occurs within a constituent such as the prepositional phrase, are more difficult for these children to remember, and they are probably not characteristic of the type of sentences they are capable of producing. We have tried to be careful not to rule out on a priori grounds any type of code-switch simply by writing a constraint against it. The unacceptable code-switched sentence seems to be unacceptable because it is too difficult to decode using the set of principles available to the bilingual. In the next chapter, we will expand upon our analysis and discuss a notion which until now has been taken for granted in our treatment of code-switching: the language of the sentence.

6 Mixing Word Level Morphology

We have observed earlier that verbs such as "underestimat +amos" (we underestimated) are impossible, except perhaps as a joke. When English stems are borrowed, the resulting verb form is always a phonologically Spanish structure. We indicated that this process is probably not a productive one among children, and that "underestimate" is probably not a good candidate anyway, since it is more than three syllables in length. The following discussion deals with a class of examples mentioned earlier when Timm's data were examined.

The paradigm outlined below is not uncommon among code-switchers.

61. a. Estaba teaching us/*nos.
    b. Nos/*us estaba teaching.
    c. Voy a hit him/*le.
    d. Le/*him voy a hit.

All of the sentences of 61 are sentences of Spanish, with code-mixed present participles (61a,b) or infinitives (61c,d). We say this, because the verb tense on estaba "was" is Spanish. In 61a and 61c, however, the object pronoun (us and him) occurs in English, the code opposite that of the verb tense. This would normally indicate that a code-change had taken place, but this case has a different explanation.

In Spanish, one has to option of placing clitics before the auxiliary or attaching them to the present participle or infinitive as in: "_Nos_ estaba enseñando / Estaba enseñándo_nos_ " (He was teaching us); "_Le_ voy a pegar / Voy a pegar_le_" (I'm going to hit him). The option chosen seems to be a matter of style only.

When a code-mixed participle or infinitive is used, pre-posing of the clitics does not disrupt the expected results, namely, that of the object pronoun occurs in Spanish--the code of the verb tense (cf. 61b,d). However, when the clitic is attached to the participle or infinitive which has been code-mixed, that is, one which is in English, forms such as "_*teachingnos_ and _*hitle_" are avoided by simply using the English form of the clitic. We feel that the operative constraint is the same as that mentioned above concerning the use of opposite language verb tense morphology with an English stem.

A similar situation arises when a Spanish participle or infinitive occurs in an English sentence, as in 62:

62. a. It sounds funny when you're _grabándolo_ (*grabándo_it_).
    b. We're going to have to cambiarlo (*cambiar_it_)
    (_grabándo_=recording; _cambiar_=exchange)

Sentences 61a and 61b are both sentences of English, with a single code-mix each. The constraint against mixed morphology at the word level prevents the starred forms, and switches the clitics to Spanish. In our terminology, all of the sentences discussed contain only one code-mix, and their acceptability or complexity should reflect this fact.

One final example of our data is worth mentioning here. In 63, we have an example of a code-mix which nearly triggered a code-change for TA.

63. TA: He had to _coserle la_...his neck, and then they had a party....
    '.....sew up his neck...'

In Spanish, the possessive adjective is not used to refer to parts of the body of a person to whom reference is made elsewhere in the sentence. Often the definite article is used: "Me quebré el brazo." (I broke my arm). In sentence 63, coserle (sew for him)is a code-mix similar to those mentioned above (cf. 62b), except that this child almost kept going in Spanish. He apparently was going to say "He had to coserle la garganta...". This is an example of "triggering" of a code-change, brought about by a code-mix. The code-change point in this sentence is the object NP: la garganta, (his neck). It is also possible that he had intended to say "He had to coserle la neck...", in which case, a code-change still may be said to occur, but there is a code-mixed noun in the code-changed noun phrase: neck. TA may have wanted to keep his narrative in "English", at this point, and whatever the cause he corrected himself by using his neck.

7 Conclusion

The major conclusion we wish to draw from this chapter is that the two concepts code-mixing and code-changing are useful and necessary in the description of code-switching. A code-mix is generally a unit--semantically speaking. This unit may be a single word, or it may be several. Such cases as the latter will be discussed in the following chapters. It is the fact that a sequence is used as a code-mix that makes a semantic unit of it. The code-change, on the other hand, does not differ from normal unilingual discourse in any significant way.

We believe that a code-change point is the only necessary theoretical machinery needed for discussing this type of code-switch, since the code-changed portion appears to proceed in a linear way. That is, while a sentence such as "El hombre who saw the accident es cubano," is possible, where the code of the sentence changes first to English at the relative clause and again at the VP back to Spanish, this second change should not be considered to be more "natural" than no change at all at this point, ie. "El hombre who saw the accident is Cuban."

We will show how a relative caluse may be code-mixed, and the relative pronoun "que" signals this in "El hombre que saw the accident es cubano." In such cases, "saw the accident" must be a segment which can be ascribed some special significance, for it has now become a semantic "unit". In this case, we would expect the verb phrase "es cubano" to be in Spanish since the sentence is Spanish. Of course, it is possible, nevertheless, that the sentence change to English at this point.

Of all of the "possible" code-switches, many are not evidenced by a particular community's speech, though they may be considered to be acceptable Still other "possible" code-switches are actually not a part of a particular community's repertoire of linguistic patterns. Furthermore, there are certain types of code-switch that are very likely ruled out entirely, except for possible cases of monolingual codification of special stylistic meanings using opposite language items as if they were elements of a different code, when in fact they are not. In this case, what may appear to be a code-switch, could, with the proper linguistic tools, be shown to be a monolingual speech act.

Chapter IX

LANGUAGE OF THE SENTENCE

1 Introduction

When speaking of code-switched utterances, researchers generally refer to "language-mixtures" or "Spanish" or "English" discourse in an intuitive or unprincipled way. Our purpose in this chapter is to continue the development of three notions which we have used throughout this dissertation to explain various aspects of intra-sentential code-switching: sentence of English; sentence of Spanish; and code-changed sentence. If these concepts have been properly formulated, they should be useful in explaining bilinguals' intuitive judgments of the language of code-switched sentences.

More importantly, these concepts may be helpful in discovering a manageable set of code-switching types for the purpose of analyzing discourse in a wide variety of settings with various participants and so forth. Although such an undertaking is beyond the scope of our research, we believe that in principle it can be done. Pfaff (1975), for one, has made some progress in this direction by noticing that code-switching seems to take on a different syntactic aspect depending upon the social situation:

> "I want to mention that there appear to be several distinct styles of code-switching associated with different social situations and having somewhat different syntactic characteristics." (Pfaff, 1975: 5)

In discussing the language of the utterance, we will borrow some published data from Lance and Pfaff primarily, and rely heavily upon our own recorded data from the discourse of the Mexican-American children. The results of several experiments we performed with these children as subjects will also be reported, as they tend to evince some psychological reality where the concepts of these three types of utterance are concerned.

2 Repetition in Translation

The practice of either partial or complete repetition of an utterance using elements of the opposite code is commonplace among these children. Most of these "repetitions in translation" are changes in code, while others are not. In general, where the repetition appears to be intentional serving to emphasize or clarify, we may observe that our description of a code-change seems to be applicable. Examples are given in 01:

01. a. Come on! Give me towel...la toalla!
'...the towel!'

b. What do you want? ¿Cuál quieres?
'...which do you want?'

c. It's your dog! Tu perro!
'...your dog! '

d. Tú quieres a Joe. You like Joe.
'You like Joe...'

e. Ya acabé. I'm done.
'I'm done...'

f. Stay here Roli. Te quedas aquí.
'...stay here.'

g. Not this one. No ésta.
'...not this one.'

h. Yo sé, I know, yo sé una canción.
'I know,..., I know a song.

Another type of repetition using opposite code elements gives an impression that a correction has been made, or that previous elements have been "erased" as an afterthought. Examples of these are given in 02:

02. a. Los spiders...las arañas dicieron que antes los babies les gustaban.
'The spiders...the spiders said that, before, they used to like babies.'

b. Es de una wheel...llanta.
It's about a wheel...wheel.'

c. Y luego, ella dijo que éstos...las arañas eran sus babies...sus bebitos.'
'And then, she said that these...the spiders were her babies...
her babies.'

d. She got borracho...she got dizzy.
'...drunk...'

e. Tenemos un nuevo...un new one.
'We have a new one...a new one.'

None of the examples of 02 involves a code-change. All utterances are either fully Spanish or English sentences, except that they contain code-mixes. We would not expect a code-change to accompany corrections of the type shown in 02, though of course examples of the following sort may exist, but we have not observed any:

03. a. ?Es de una wheel...a llanta/a wheel.

b. ?Las arañas eran sus babies...her bebitos/her babies.

It is conceivable, on the other hand, that 02e, for example, might have been uttered with a change of code as in 04:

04. Tenemos un nuevo.. a new one.

If there is a difference between 04 and 02e, the difference is very subtle. We can only suggest that 04 would serve to indicate that an abbreviated version of the statement "Tenemos un nuevo" had been repeated in the opposite code--that is, a code-change had occurred. The redundancy which is created is only apparent, and the impression is given that the change to English conveys one of the social significances of code-changing. 02e, on the other hand, seems to be more suited to a class of "self corrections" which are often accompanied by "I mean" or the like. No code-change is involved, and the impression that the incorrect lexical item was used may account for the majority of such instances. It is very difficult to prove these suppositions, and we are motivated to discuss such examples mainly in the hopes that they will stimulate further thinking on the matter.

Another type of repetition in translation might best be classified as a false start. Examples are given in 05:

05. a. Yeah, she only sabe como dijir...ella nomás sabe como dijir "Joe", porque el novio de ella es Joe.
'Yeah, she only knows how to say...she only knows how to say "Joe", because her boyfriend is Joe.'

b. Roli, put that...ahí ponla en el zacate.
'Roli, put that...there, put it on the grass.'

c. Please don't...no me llames por favor.
'Please don't...don't call me please.'

In 05a, a change in code occurs at the VP, sabe como dijir (decir), and the sentence is then interrupted by the speaker. She may have felt the point of the code-change to be incorrect, and so begins again in Spanish. Note that the subject pronoun ella occurs, even though it does not have to. Usually, in Spanish, if the subject is clearly stated, it need not be repeated. In 05b, put that is essentially repeated in the Spanish portion, and in 05c please don't is entirely expressed in Spanish in the repeated portion. According to our analysis, in 05a, the child had already changed to Spanish and the sentence could have been easily completed in Spanish. In the other two, 05b, c, a code-change could have occurred or a code-mix might have been employed. That none of these possibilities happened is probably due to the child's having perceived that Spanish should be used in the particular situation. These children seem to feel that the entire utterance must be in Spanish. Code-switching is apparently aberrant in certain circumstances.

3 A Hard Look at Code-Changes and Code-Mixes

In this section, we will further develop the distinction between code-changing and code-mixing--the two phenomena which we feel are the basic elements in code-switching. We have argued that it is not sufficient to speak of only one device in describing code-alternations. Rather than proposing specific constraints for the point of code-switch, we have attempted to characterize "unlikely" code-switches as merely too complex within our framework of changes and mixes. We have suggested that there are both "mixed" sentences and "changed" sentences, and that there should be reflections of these types in individuals' intuitions concerning the "language of the sentence". We have also indicated that where constraints exist of a syntactic nature, they are apparently an expression of a compromise between already established pairs of rules in both languages.

Carol Pfaff (1975) has observed that the absence of code-switched conjugated verbs, as in "*Dónde teach?", is probably due to a very general tendency in code-switching:

> "Switching to English verbs appears to be maximally acceptable where the relevant agreement and tense-mood information is given on a preceding Spanish verb, i.e., if the English verb is preceded by a conjugated Spanish auxiliary or if it is the infinitival complement of a conjugated Spanish verb." (Pfaff, 1975: 4)

This statement accounts for many oberved utterances such as those of 06. The initial [P] indicates that the example is from Pfaff's data.

06. a. Your mother's going to cocinar for supper.
'...cook...'

b.P Dónde estás teaching?
'Where are you teaching?'

c.P Fui a cash su cheque.
'I went to cash his check.'

d.P ...cuando lo comenzó [a] train.
'... when he started to train him.'

e.P Yo creo que apenas se había washed out.
'I think it had just washed out.'

That the "relevant tense-mood information" may be expressed almost by default, or by context, is demonstrated by 07a,b:

07. a.P Tú lo underestimate a Chito.
'You underestimate Chito.'

b. Esa es la mjuer...la que tú like en tu mano...
'That's the woman...the one you like, in your hand [photo].'

Note however, that the person information is given by "tú", although in Spanish "tú" is generally used to distinguish the addressee from among several--to emphasize. In neither our nor Pfaff's example does "tú" seem to belong, if the English verb were not used. Our own adult informants, while agreeing that both of the examples above are acceptable, reject those of 08 where tense information is clearly marked:

08. a. *Tú lo underestimated a Chito

b. *...la que tú liked...

c. *El lo underestimates a Chito
'He...'

d. *...la que él likes...
'...he...'

On the other hand, Pfaff has observed utterances such as those of 09:

09. a.P El perro *chewed him up*.
'The dog chewed him up.'

b.P Todos los Mexicanos *were riled up*.
'All the Mexicans were riled up.'

Of course, as Pfaff points out, in 07 "tú" may be used to disambiguate the subject, as is often done when "usted, él, ella" (you, he, she) are used to clarify the subject of a verb in Spanish. But in 08a, b, the use of "tú" or any subject seems to still result in an unacceptable sentence. The cause must be the tense marking on the verb. Pfaff, describing 07a and 09a, b, states that "the constraint is not against switching to any English verb, but against switching to one unmarked for tense." (Pfaff, 1975: 7) this does not account for the unacceptability and apparent lack of occurrence of the sentences of 08, since these verbs are in fact marked for tense.

Under our analysis, "Tú lo *underestimate* a Chicto" (07a), and 07b are examples of code-mixed main verbs. This is not a common type of code-mix, and this may be due to the restriction which we feel is placed upon the use of code-mixed verbs. That is, only the bare morpheme may be used. It may not carry any tense information. In contrast, nouns, for instance, may carry *number* information when used as code-mixes: "Tengo dos *bills*." (I have two bills.) It is strange, however, for a noun to carry case information when code-mixed: "?Es parte del *raft's* vela," unless, of course, the code-mix extends to the modified noun: "Es parte del *raft's sail*." (It's part of the raft's sail.)

The use of a code-mixed verb with "tú" is the only type we, or apparently Pfaff, are aware of. Though we would expect to find them with other persons, we would not expect the third person singular to be an acceptable one, because the lack of the third person suffix in English might be felt as much as its use to be unacceptable. Our informants are vague on the subject, and at best their feeling is that nearly all code-mixed verbs sound a bit strange.

Now sentences such as those of 09 are code-changes. That is, the whole sentence changes to Spanish at the VP: "El perro *chewed him up*." (09a) There is no problem concerning what to do with verb tense, or particles or objects, because the syntax has totally changed to English. The speaker is "forced" into a code-change because of grammatical considerations. Even taking "chewed up" to be a lexical unit, the sentence using it as a code-mix would very likely be rejected by most bilinguals: *"El perro lo *chewed up*." In 09b, on the other hand, if "riled up" were taken as a adjective, there is no good reason why it could not be code-mixed: "Todos los Mexicanos estaban *riled up*."

Note the difference between sentence 10 and 11:

10.P Fui a *cash* su cheque.
'I went to cash his check."

11.P No van a *bring it up in the meeting*.
'They're not going to bring it up in the meeting.'

We call the use of "cash" in 10 a code-mix, because it is marked by the complementizer as Spanish, and it is an English lexical item. Code-changes at this point apparently do not occur: *"Fui to *cash his check*." There is no doubt some incompatibility between Spanish "a" and English "to" in this function, although used as a directional preposition, the two seem to be compatible: "Entonces, éste se fue *to school* / *a la escuela*."

Additionally, if the word "cash" in 10 marked a point of code-change, we would expect more than just one word to be in English. Code-changes usually extend over larger portions of a sentence, and switching back to the language in which the utterance was initiated is probably more rare than the practice of completing a sentence in the language of the code-change.

Now sentence 10 could have undergone a code-change as well as the use of "cash" as a code-mix. The result would have been "Fui a cash his check." Often, a code-mix may "trigger" a code-change which can extend over the entire remainder of the sentence. In this case, "his check" is the result of a code-change at the object NP. Now the reason why "Fui a cash his cheque" would be strange, though not necessarily impossible, is simply that a code-mix has been incorporated into a code-changed constituent. This procedure, as we have pointed out previously, seems to complicate matters for code-switchers--at least when sentences are "short". Unfortunately, we must continue to return to this unsatisfying notion. Nonetheless, it is likely that there is no way around it in certain regards.

Sentence 11 contains the code-mix "bring up". However, somehow, the object must be expressed. It would have been possible to have said "No van a bring up eso..." (They're not going to bring up that...). Another way of expressing essentially the same thing would have been to say "No lo van a bring up..." (They're not going to bring it up...). In the former, the demonstrative pronoun "eso" (that) occurs in Spanish after the verb, and it so occurs in the code-mixed sentence. In the latter case, the pronoun object "lo" (it) must occur either before the auxiliary or after the infinitive;

however, as we have pointed out, forms such as "*bringlo up" or "*bring uplo" are definitely ruled out. Let us assume that the alternatives above were possible, but they just were not used. Having said "No van a..." the speaker is committed to use either "bring it up" or "bring up eso", or to start again and use "No lo van a...". The code-change at the object NP, namely "it" is forced by functional considerations. This code-change in turn triggers the rest of the code-change we observe "in the meeting". Of course, it would have been possible to change back to Spanish at this point: "No van a bring it up en la reunión." This additional change may be said only to be less likely than the absence of a change of code, as in 11, though many possibilities are available to the code-switching bilingual.

From a purely objective point of view, the alternative "No lo van a bring up en la reunión." is the least complex code-switch, for there is only one code-mix--the simplest form of code-switching.

Pfaff's data contain another example of code-switching which is analogous to 11. Consider sentence 12:

12.P Luego, pos el compañero debe de suck on that para que salga la pozona.
'Then, well, his partner ought to suck on that so that the poison can come out.'

We suspect that in this case, "suck on that", may be code-mixed as a unit. Of course, it is also possible that the object of "suck on", "that", is a code-change which extends only to the end of the first sentence. The beginning of the second sentence, "para que salga..." is then the point of code-change back to Spanish. This sentence is reminiscent of one we observed uttered by one of our Mexican-American researchers: "No van a aceptar a una mujer que *can't talk business*." The relative clause "...que *can't talk business*" contains a large code-mixed expression--the underlined portion. Code-changes are possible at the relative clause, but the relative pronoun must be in the language of the changed portion: "...una mujer *that can't talk business*." It would be strange to find a code-mix of the sort described above which was not more or less idiomatic or strongly set by the culture. For example, one would not expect to find "?una mujer que *enjoys horses and sports*". On the other hand, a code-changed relative clause is not at all strange in this regard: "...una mujer who enjoys horses and sports." The parallel is clear where code-mixed adjectives, nouns, verbs and so forth are concerned.

In discussing narratives earlier, we mentioned that when the children were told to alternate Spanish and English, they changed code much more than they mixed codes. Essentially, they were doing just what we asked them to do, it would seem. We include one interesting example sentence from a story which was not included in that chapter.

13.TA: *Donald Duck* ah...se halló *a...cat*. Se fue para...*the store*...*to*... para...*to buy him some food*. Luego, fue...*at home to give him something to eat*.

'D.D. found a cat. He went to the store to buy him some food. Later, he went [at] home to give him something to eat.'

First, note that "se halló *a*" was said with no pause, the pause coming when he was looking for a suitable noun in English, "cat". There are two code-changes in just this part: "Donald Duck / se halló / a cat." We do not feel that a strong case can be made for a claim that code-change points are marked by a pause. This is but one of many examples which would be difficult to account for. Certainly, a pause *may* occur at the point of many code-changes.

The next code-change is at NP which is a part of the prepositional phrase "para the store". This, we have said, is not a usual point for changing codes, though not ruled out. Next, "to" is used as if he were going to continue in English with an English infinitive, then the Spanish complementizer "para" is used, then back to "to" again, with the infinitive "buy". Had he actually used "para buy him..," this would have been a code-mix. The object "him" is code-changed because of the problems mentioned earlier with respect to placement of object pronouns. However, he did not code-mix. The next code-change is at the beginning of the sentence "Luego, fue...". The use of "at home" must be considered to be an error caused by some sort of interference. In Spanish, one would say "fue a casa" (he went home) using the preposition "a". Some identification between "a casa" and "at home" may have been made by sounds. The preposition "at" may have been chosen because it was felt that some preposition was needed, since one is needed in Spanish, and "to" does not form a recognizable unit with "home": "?to home". "At home", on the other hand, while not suitable for this instance, is at least familiar. We have found that "*fue home" (he went home) is strange to all of our informants, while "fue downtown" is acceptable. We have no idea why, except that the acceptance of "está at home" and "está downtown" (he is at home/downtown) but rejection of "*está home" (he is home) may enter into the matter.

The following dialogue contains some interesting examples of code-switching:

14. [OV]: ¿Y qué te gusta más en la escuela? ¿Qué subject te gusta más? ¿Reading o math o spelling?

PA: El reading, el spelling y el math, y todos.

Normally, though we hesitate to claim anything to be impossible, the article is used in Spanish but not in English for listing such subjects as seen in 14. The usual English and Spanish listing techniques are shown in 15:

15. English: Reading, spelling and math.
    Spanish: La lectura, la ortografía, y las mathemáticas.

In 14, PA is speaking Spanish and code-mixing the names of the subjects. We know this not only because the conjunction and articles are in Spanish, but because the articles are used where they would not be used if English syntactic principles were being followed. Assuming that [OV] would use the articles with the Spanish words in a Spanish sentence, it must be concluded that he was code-changing at individual words--to English for the names of the subjects, and to Spanish for the conjunction "o" (or). We can only assume that he used principles of code-changing in order to be certain that PA could understand. At this level, however, it makes little difference, and PA, of course, responded in Spanish anyway, using several code-mixes. Reasons for such code-switching activity are often very difficult if not impossible to pin down absolutely, yet they do occur.

One might ask why the English conjunction was not used by [OV]. This situation was one in which [OV] was attempting to interview PA completely in Spanish. His listing of the subjects with English "or" would have constituted an entirely English utterance. The utterance recorded in 14 may be a compromise between "speaking English" and totally adapting the syntax to Spanish.

Lance's (1969) article on Spanish-English code-switching contains several interesting varieties of examples. We will mention a few of these examples here, and make some speculations on how they might be analyzed.

16.L I think yo gasto mas gas en ir pa' 'llá...
'I think I use more gas going there...'

17.L Maybe two-three pennies more, but you usates más pa'ir pa'allá.
'...you use more to go there.'

18.L En la tienda trae un paquetita por...I think it's seventeen.
'In the store they carry a pack for...'

19.L Como digo, they don't try.
'Like I say...'

20.L Te digo que este dedo has been bothering me so much.
'I'm telling you that this finger...'

21.L I think I was mopping y me pegué asina.
'...and I hit myself like that.'

22.L Are you sure que hay asina, porque pos no en todos hay?
'...that there are some like that, because, well, they're not in all of them.'

Sentences 16-22 all contain code-changes. "gas" in 16 may or may not be a code-mix. In 16, the embedded sentence is the point of change. Note that the unnecessary use of "yo" with the Spanish verb and the absence of the complementizer "que" may indicate that English is influencing the function of Spanish elements. It is as if "I think I use" were being literally imposed as a pattern upon the Spanish "(yo) creo que (yo) gasto". In Spanish, the complementizer "que" is not optionally deleted as in English.

Sentence 17 is an example of a code-change at the VP. In 18, the code-change at the sentence "I think it's seventeen" may be triggered by the anticipation of a code-mixed number. Lance indicates that these speakers tend to think of prices in English. The pause while searching for the number in English probably caused a change to English. Sentence 19 is typical of many code-changes at the beginning of a sentence, and 20 is a change at the VP. In

21, the code-change is at the second conjunct of conjoined sentences, and the conjunction is in the language of the second conjunct. This is the usual practice, though as we will point out later, the use of the conjunction in the language of the first conjunct may bring about a subtle difference in meaning. Finally, sentence 22 is code-changed at the embedded sentence.

In the following discussion, we will show how sentences may be code-mixed. We consider the use of conjunctions in the code of the preceding conjunct to be a sign of a code-mix, while a conjunction in the same code as the code-switched conjunct signals a code-change. This difference has been overlooked by those who consider the code of the conjunction to be a randomly variable feature of code-switching. The syntactic ramifications of this rather simple distinction are quite interesting. Consider 23:

23. a. He found out why I left and Juan se quedó. [CODE-MIX] (in English S)

b. He found out why I left y Juan se quedó. [CODE-CHANGE]

c. He found out why I left and John stayed. [MONOLINGUAL]

The monolingual sentence 23c is ambiguous. That is, it may mean either 24a or 24b:

24. a. [He found out why I left] and [John stayed]

b. He found out [why [[I left] and [John stayed]]]

In 24a, the two conjuncts are the large sentences as shown in brackets, and one might even insert "then" without changing the meaning: "He found out why I left and then John stayed." (cf. 24a) In the second meaning, "I left" and "John stayed" are the two conjuncts, both of which are complements of "He found out why I left and then John stayed." (cf. 24a) In the second meaning, "I left" and "John stayed" are the two conjuncts, both of which are complements of "He found out why". This latter underlying structure is similar to that of conjoined objects for example as in: "I like apples and oranges." The parallel to the meaning of 24a is remote unless "oranges!" can be used as an interjection.

Sentence 23b is ambiguous in this way also. The code-change may be an entire conjunct not dependent upon "He found out why" or it may be one of the elements of the list of complements of "He found out why". However, 23a is not ambiguous. It has only the meaning of 24b. "Juan se quedo" in 23a is understood to be one of the elements of a list of complements of "He found out why", and it may not be the second of two conjuncts as in 24a. That is to say, 23a cannot mean "...and then Juan se quedó." In fact, the use of Spanish "entonces" (then) is strange ?"and entonces Juan se quedó."

We can explain why lists of nouns as direct objects may use either conjunction simply by observing that this ambiguity or lack of it makes no difference in cases such as 25:

25. a. I like apples and naranjas. [CODE-MIX]
b. I like apples y las naranjas. [CODE-CHANGE]

Note that the definite article must be used when the code is changed. Sentence 25a is unambiguous, in that "apples and naranjas" are conjoined object NP's. Sentence 25b, while in principle ambiguous, is in actuality no more so than "I like apples and oranges" mentioned earlier.

Code-mixes are felt to be "an element" of an English structure, when they occur in an English sentence. Code-changes behave as if the whole sentence were monolingual—not especially Spanish or English, however; all one can say is that a sentence *begins* in one language and *changes* to another.

Now, consider the observed examples of code-switching from Lance's (1969) data:

26.L It doesn't matter if you tore it or...*o lo que haigas hecho*.

'It doesn't matter if you tore it or...or what you might have done.'

27.L Just when they get shoes or *les voy a comprar vestido o algo asina*...

'Just when they get shoes or I go to buy them clothes or something like that...'

28.L Le saco la semilla esa, y se le echa el hamburger meat y el queso y todo eso, y *you let 'em fry real slow en*...en el sartén.

'I take out that seed, and you put the hamburger meat in, and the cheese and all that, and you let 'em fry real slow in...in the pan.'

In 26, the speaker has corrected herself when, according to the theory which claims the code of the conjunction to be random, she might have either not repeated the conjunction as in "...tore it or...lo que...", or repeated it in English as in "tore it or...or lo que...". Instead, she changed to Spanish apparently after realizing that "or" was not appropriate. Our analysis is capable of easily explaining this correction. If "or" had been used to conjoin the two sentences of 26, and the second sentence was in Spanish, then the second conjunct would have been marked as a *code-mix*, parallel to 23a. This means that "you tore it" and "lo que haigas hecho" would then be taken as two sentences conjoined by "or" and both essentially within the scope of "if". The inference would be that what was meant was "if you tore it or **if lo que haigas hecho*." That is, by using the English conjunction with a following Spanish conjunct, the latter conjunct is taken to be an element of a *list* in which all elements have equal status and are predicated by the same elements--in this case "if".

Now, if the second conjunct had been "ella lo quebro", for example, then we could expect that the English conjunction would be suitable, as in 29, since the intention is that both conjuncts be within the scope of "if":

29. It doesn't matter if you tore it or ella lo quebró.
'...she broke it.'

However, the intended meaning of 26 requires that "if you tore it" and "lo que haigas hecho" be conjuncts and in turn, in deep structure, subjects of "doesn't matter". The correction from "or" to "o" may have been made at the point where it was realized that the Spanish second conjunct was not within the scope of "if".

Sentence 27 is an example of a case where the intention was to place a code-mixed sentence, "les voy a comprar vestido", within the scope of "when". The two conjuncts are "they get shoes" and "les voy a comprar vestido", as in 30 below:

30. when [[they get shoes] or [les voy a comprar vestido]]

The use of the Spanish conjunction "o" (or) would have been acceptable, we are claiming, in this case, because the parsing of 30 would have been one of the possible readings. What we are saying would be unlikely for a bilingual to say is characterized by 31:

31. ?Are you leaving, or te vas a quedar?
'Are you leaving, or are you going to stay
?He came in, and ella salió.
'He came in, and she left.'

We use [?] for these simply because there is no good reason to use a code-mixed sentence. A code-change would be better, but it is impossible to say that there could not be a situation in which the elements of these sentences could be items of a list.

In 28, the sentences which are conjoined, including the English code-mix "you let 'em fry real slow", are being listed as if they were numbered steps of a recipe. The speaker has no reason, apparently, to change the code of the utterance to English, and the prepositional phrase "en el sarten" is an indication that this is correct. In 27, "o algo asina" may be a reference to "vestido" or it may be a reference to another sentence within the scope of "when". If the latter is true, then the code-mix "les voy a comprar vestido" may be said to have triggered a code-change at this conjunct. If "algo asina" is one of two conjoined objects of "comprar", on the other hand, then it is simply a part of the code-mixed sentence.

Subordinate clauses may also be used as code-mixes. Sentence 32 is an example of this:

32.L Entonces me dijeron que la pusiera una en el cuarto, pa'que it'd get rid of the dust or todo eso.

'Then they told me to put one in the room, so that i'd get rid of the dust or all that.'

In 32, the subordinating conjunction "pa'que" (para que=so that) is in the same language as the preceding sentence. The use of an English sentence with this conjunction signals a code-mix. A code-change would have used "so that". The effect of the code-mix is to cause the sentence which is subordinate to appear to be taken out of context from a previous experience in which this sentence had a special significance. It is very similar to quoting the person who told the speaker that "it'd get rid of the dust". The sentence takes on the aspect of a "neat unit" similar in status to the code-mixed noun, adjective, adverb and so forth.

What is important here is not why the sentence mentioned occurs in English, but why the conjunction is not in English. Informants agree that there is a difference between "pa'que it'd get rid of the dust" and "so that it'd get rid of the dust" when used in 32. The difference is difficult to explain precisely, but it seems that the code-mixed version, the former, uses the underlined portion as a stylistic unit within a Spanish sentence, while the latter code-changed version makes no point of this usage. The difference is similar to that between the examples mentioned earlier: "No van a aceptar a una mujer que can't talk business/who can't talk business". In the former, "can't talk business" takes on the aspect of an idiomatic or culturally set phrase, whereas in the latter--the code-change--the speaker is merely informing with no special significance attached to the phrase itself, although perhaps there is a change in general affect associated with the change in code at this point.

The children we studied generally did not code-mix sentences. Most of our data are similar to 33 where code-switching at the sentence level is concerned:

33. LS: My madrina's son me estaba cargando y me tumbó and it hurt.
'My godmother's son was carrying me and he dropped me and it hurt.'

The change in affect when speaking of the painful part, "and it hurt", is likely the cause for the code-change. Again, about all one can say is that there is no good reason to code-mix the sentence "it hurt" as in "y me tumbó y it hurt." These are events in sequence, not items on a list.

Sentences 34 and 35 at first seem to be cases of the "random" use of code for the complementizer.

34.L Are you sure que hay asina, porque pos no en todos hay?
'Are you sure that there are some like that, because, well, they're not in all of them.'

35.L Se me hace que I have to respect her, porque está ...older.
'I feel that I have to respect her, because she is...older.'

However, 34 is an example of a code-change at the embedded sentence "que hay asina", while 35 contains a code-mixed sentence "I have to respect her". Accordingly, the underlined portion of 35 stands out as a unit which is perhaps a distillation of words spoken to the individual uttering the sentence. In any event, it is something special about the actual phrase, not just the general meaning conveyed by it, that causes "I have to respect her" to be an English code-mix. It is close to being an indirectly quoted phrase which relates to someone having said "You have to respect her". Note also that after the code-mix of 35 is completed, the sentence reverts back to Spanish.

In 34, the sentence continues in Spanish once the code-change has been made. This code-change parallels all that has been said concerning code-changes at coordinate sentences.

We have tried to show that sentences may be either code-changes or code-mixes. Nouns and verbs are less likely to be code-change points, but rather used as code-mixes. This is probably due to the nature of the way in which they are used as "units" to which some special significance has been attached. Also, a code-change occurs only at a constituent, usually major. Sentence 36 could not be construed as containing a point where the code of the sentence has been changed:

36. We made a piñata.

On the other hand, in 37, the code of the sentence may have been changed at the object NP:

37. EC:We made una piñata.

We say "may have been changed" because it is possible that "una piñata" might be a unit for this speaker much as "the Osmonds" probably was for the child who said "Vamos a ver a the Osmonds".

4 Testing for Code-Mixing and Code-Changing

Asking children of the ages of those we studied for intuitions concerning acceptability of sentences--code-switched or not--does not work well enough to be a reliable tool. Most children, when asked whether a sentence is "OK" or "funny, strange" etc., judge the meaning of the sentence for acceptability in the testing situation. For example, "John has a dog" is "funny" a friend in school whose name is "John" really has a cat, or if John likes to be called "Jack", and so forth ad infinitum. Some children are clearly good at metalinguistic modes of thinking, and their comments are valuable.

However, when testing 15 or 20 children it is easier to deal with tasks which have less ambiguous results. One test which we devised sought to find out whether adaptation of code-mixes to the phonology of the sentence in which they occur impaired the children's ability to notice the elements which were mixed.

We taped a set of 10 English sentences each containing either two, one or no code-mixed Spanish words. All Spanish words were pronounced with English phonology. These sentences are given below.

38.
(1) I was looking for that tall delgado teacher at school.
(2) Where did you conseguir your new watch?
(3) She spends a lot of time on the Atlantic playas.
(4) Roberto ganó a bike at the bazaar on Wednesday.
(5) I hate to despertar people when they're sleeping.
(6) After Badjina broke the ventana, he had to pay.
(7) John told me that the cigüena brought him.
(8) I felt that his quid pro quo was not acceptable.
(9) Well, that is an eleemosynary matter for the bunko squad.
(10) The cortina was closed at the biblioteca when I arrived.

After hearing each taped sentence, the child was asked "What Spanish words did you hear?" The percentages of the sample of 15 children reporting particular words as Spanish are given in 39:

39.

Sentence	Item	% of sample	Gloss
1.	delgado	46%	(thin)
2.	conseguir	73%	(get)
3.	playas	66%	(beaches)
4.	ganó	33%	(won)
	Roberto	26%	----
	bike	6%	----
5.	despertar	60%	(wake up)
6.	ventana	60%	(window)
	Badjina	26%	----
7.	cigüena	66%	(stork)
8.	quid pro quo	6%	----
9.	bunko	46%	----
	eleemosynary	13%	----
10.	cortina	86%	(curtain)
	biblioteca	33%	(library)

Some words were chosen because we were sure the children knew them. The English words "quid pro quo" and "eleemosynary" were chosen to throw them off, assuming that they might be taken to be Spanish words which they did not know. Note that only 6% said the former was Spanish, and 13% reported the latter to be Spanish. Each child was asked if he knew either word after the test, but none did. Nor did they know "cigüena", but 66% knew it was Spanish.

It is clear that fewer children were able to notice Spanish code-mixes when they were pronounced in this way than when Spanish words were included in an English text without phonological adaption, as discussed earlier. In that test, we concluded that the pronunciation was the primary criterion for the children's judgments. In this case, the highest percentages seem to roughly correspond to the best environments for code-mixing. "delgado" was noticed only by 46%, and it was an adjective in English position. The conjugated verb "ganó", noticed by only 33% as Spanish, is an unlikely code-mix. The name "Roberto" is for many apparently an English name, or at least an English word, when pronounced in English. "Bike", for one children, may have been perceived as borrowed from Spanish, since it is often used in Spanish. "biblioteca" is the only good code-mix which did not have more than 50% recognition. It is difficult to say why only a third of the children noticed it.

We strongly suspect that the adaptation of pronunciation to English was similar to introducing noise into the normal technique used by these children for distinguishing Spanish from English. Although these data do not prove it, we feel that it is possible that the children relied upon another strategy for finding Spanish words, namely general phonological shape combined with relative acceptability as a possible code-mix.

Some of the comments by the children are worth mentioning here. Concerning sentence 7, LM responded, "Yes, I can't say it, but it means 'cigüena'" pronouncing "cigüena" in Spanish. She did not know what the word meant, nor its English equivalent. ES, and others, responded by giving the Spanish word with the English pronunciation in many cases. In one instance, he said, "Conseguir [ENG], that's wrong. Not conseguir [SP]! It's consiguer [SP]! You said it wrong!" He was not so much correcting the pronunciation as he was pointing out our ignorance of his dialectal form of the verb. This form is the product of a confusion caused by stem changes in conjugated forms of the verb "conseguir". FM, about sentence 6, said, "Yeah, Spanish word...'broke the window'."

Many interesting statements by the children have been recorded. Much of their intuitive knowledge has already been carefully taken into account in our discussions. While checking to discover whether the children had intuitions concerning the placement of adjectives, for instance, one comment in particular struck us as extremely relevant. RM, judging the placement of the adjective in sentences such as "Yo tengo un interesting libro" or "I know a guy flaco" etc. to be better than "libro interesting" and "flaco guy", finally remarked that she knew why some were incorrect. The item was "Yo conozco a un old hombre" which she preferred to "...un hombre old". She explained, "Like in the second one [hombre old], you're saying some Spanish and then one letter in English. In the first one, [old hombre] the words are in Spanish." Of course, she meant "word" and not "letter" above.

We were continually surprised by this explanation. It is obviously not to be taken too literally. We feel that what RM, and many others, are trying to verbalize is the feeling that in a good code-mix one should not be aware that the structure has changed from one code to another. We suspect that RM was essentially explaining the difference between code-changing "saying some Spanish and then one letter in English" and code-mixing "the words are in Spanish." Actually, the sentence is in Spanish. She was giving some support for our hypothesis that code-mixing is a device which does not give the impression to the listener that now the opposite code is being spoken, rather elements from the opposite code are being used. RM knew, of course, that "old" was not Spanish, but it seems that she was trying to say that the words were being used properly as if they could have been Spanish. That is, the Spanish sentence structure was not disrupted for her. If this is the case, it is very interesting that such comments are being made about the occurrence of an adjective occurring in English position: "un old hombre". Our earlier discussion dealt with this phenomenon, and it will not be repeated here.

When speaking of code-switching, one inevitably must make reference to alternations of code in "a Spanish sentence" or in "an English sentence". We have developed the notions of code "mixing" and "changing" in an attempt to provide a principled account of what "sentence of" a particular language means where code-switching is involved. It is very clear to us that a single code-mixed noun does not cause informants to feel that the sentence in which it occurs is "mostly in the code" of the code-switch. Yet, where sentences consist of an equal number of Spanish and English words, some sentences seem to be more Spanish or English than others. Still other sentences may contain a majority of Spanish words, for instance, and be felt to be mostly English. We tested the children several times to try to discover whether there were any statable linguistic principles involved in their judgments.

Many approaches are in principle possible. None we have used explains all of the results we obtained. One set of ten sentences containing good and bad code-changes and code-mixes was recorded and played to a total of 19 children and adults. They were all asked "Is this sentence mostly Spanish or mostly English?" For thirteen of the children, we played the tape and obtained responses to this question on three separate occasions.

The sentences used in this test are given in 40, (Set I). Spanish portions have been underlined, and the percentage of total judgments for each sentence is given with the majority language.

40. Set I

(1) Oye, in the summertime vamos a nadar in the pool. [58%SP]

(2) Te gusta leer books about animals and plants? [63%ENG]

(3) As soon as I llegué, sabía que I was in the wrong house. [52%ENG]

(4) My friend John se casó con my cousin's boss. [73%ENG]

(5) Sabías que my brother tuvo a set of hot wheels? [58%SP]

(6) Mira, my mother quiere cocinar these vegetables for supper. [75%SP]

(7) Este Alberto siempre quiebra his toys and everything he gets. [56%SP]

(8) Usually, when Juan is driving, anda muy rápido. [58%SP]

(9) Me llamó Mary yesterday en el teléfono. [50%S-E]

(10) I planted radishes yesterday, y ya están creciendo. [77%ENG]

Now, it must be understood that even the children tested wanted to say that these sentences were all Spanish and English, but they were asked to decide whether each one was "mostly" one or the other. A usual reason given for a choice was that "most of the words are in" Spanish or English. It can be seen that this was not the obvious strategy used by the group in the case of sentences 1, 5, 6, 7, 8, and 9 in this set, since the majority of the total of 48 judgment by 19 persons does not agree with the word count. Each sentence contains at least one code-change, and we would expect that they should be perceived as both Spanish and English. But what is curious is that some of the percentages are not close to the expected 50%, if only chance were involved. In particular, sentences 2, 4, 6 and 10 have caused some agreement among the participants and in three trials by each of 13 children.

Looking just at individual children who took this test three times, sentences 2, 4, 6 and 10 also had the highest number of self-consistent judgments--that is, where one child judged the sentence three times consistently as either Spanish or English. Note that in sentences 2 and 4, the main verb is of the opposite code from the majority of judgments. In sentence 2, there are 5 English words and 3 Spanish words--yet it was judged as "mostly English" by 63% and individual children were self-consistent on three trials in 8 cases. The rest of these data broken down in this way are given in 41:

41. Number of "Self-Consistent" judgments for Set I sentences

Sentence	Spanish	English
(1)	4	2
(2)	2	8*
(3)	3	0
(4)	3	10*
(5)	1	0
(6)	11*	1
(7)	5	2
(8)	3	1
(9)	2	3
(10)	1	10*

* indicates high number of self-consistent judgments

The immediate and obvious question is "What is so special about sentences 2, 4, 6 and 10?" Note that sentence 2 and sentence 7 are very similar code-changes syntactically, changing code at the object NP. Yet one is judged as English and the other as Spanish consistently by 8 and 5 children respectively. Much could be said in an attempt to explain the numbers we obtained, but we feel that what essentially happened was that for certain sentences a host of semantic and social factors conspired to cause judgments to swing in one direction or the other. That is, in sentences 1 and 6, for instance, the mere use of "oye" and "mira" *may* have swayed judgments towards Spanish, simply because they are linguistic elements with strong ethnic identification. We attempted to discover whether individual children focussed upon a certain portion of the sentence, consequently causing them to notice one part more than the other. We asked "What was that sentence about?", and the results were far from being conclusive. Children who said that sentence 2 "was about books", for instance, said that the sentence was Spanish, and so forth. Still, focus may have played some role in swaying judgments.

Saying that a sentence is a sentence of Spanish means that it should be suitable for Spanish discourse. We had hoped that the question "Is it mostly Spanish or mostly English" would get at this characteristic. Some children may have taken for granted that the beginning of each sentence did not represent a point of code-change, and consequently that the code which initiated the sentence was the code of the discourse from which it was drawn. This theory accounts for some but not all of the majority judgments. At first, we believed that the higher percentages and rates of agreement on three trials reflected *better* code-changes, or less complex ones, but it is difficult to argue for this point.

We then devised a second set of sentences based upon the first. These are given in 42:

42. Set II

(1) *Te gusta leer* good history books or comic books? [83%ENG]

(2) Look, my sister *quiere cocinar* these potatoes for lunch. [83%ENG]

(3) Occasionally, when Juan is working, *lee el periódico*. [75%ENG]

(4) I wrecked my car yesterday, *y ya lo han arrelado*. [75%SP]

(5) Alberto tiene hambre, but I don't. [58%ENG]

(6) Mi amiga Maria se casó con my uncle's friend. [66%SP]

(7) Mira, my mother wants to cocinar these vegetables for supper. [66%SP]

(8) Te gusta leer magazines or books? [58%ENG]

(9) Planté unos frijoles ayer, and they're already growing. [50%E-S]

(10) De costumbre, cuando Jim está manejando, he goes really fast. [58%ENG]

Only 12 children were tested with this set of sentences on one occasion. Still, some idea can be gotten of what is for this group (1) more Spanish than English (2) more English than Spanish and (3) more or less Spanish-English.

Compare sentences from Set I, 2, and Set II, 1 and 8:

43. I-2. Te gusta leer books about animals and plants? [63%ENG]

II-1. Te gusta leer good history books or comic books? [83%ENG]

II-8. Te gusta leer magazines or books? [58%ENG]

The use of "or" in II-1 and II-8 makes the code-switch unambiguously a code-change. We have had the opportunity of using a separate set of sentences in a more limited test with about five children and four adults, and we will include these sentences when relevant. These sentences are marked X-, as in 44:

44. X-1. Te gusta leer good history books o comic books?

X-2. Te gusta leer magazines o books?

Sentences X-1 and X-2 are Spanish sentences with English code-mixes. Our limited sample was nearly unanimous that X-2 was "mostly Spanish"--only one child said it was "mostly English". Sentence X-2 was said to be "mostly Spanish" by all of our informants. The only point one can make here is that the use of "or" in the sentences of 43 tended to make responses more in the direction of English. Although the sample differs for X-1 and X-2, the use of "o" seems to be a powerful element in causing judgments to be more Spanish. We cannot explain, however, why all of the sentences of 43 tended to be judged English rather than Spanish. Certainly, it is possible that there is no single reason.

Now compare sentences I-6 and II-2 and II-7:

45. I-6. Mira, my mother quiere cocinar these vegetables for supper. [75%SP]
II-2. Look, my sister quiere cocinar these potatoes for lunch. [83%ENG]
II-7. Mira, my mother wants to cocinar these vegetables for supper. [66%SP]
X-3. Look, my mother wants to cocinar these vegetables for supper. [ENG]

The use of "mira" seems to be causing an impression that the sentence is "mostly Spanish", even in II-7 where only "cocinar" is used.

Now consider sentences I-10, II-4, II-9:

46. I-10. I planted radishes yesterday, y ya están crediendo. [77%ENG]
II-4. I wrecked my car yesterday, y ya lo han arreglado. [75%SP]
II-9. Plante unos frijoles ayer, and they're already growing. [50%S-E]

What the percentages seem to be saying is that these sentences are neither fully Spanish nor English. Nearly identical sentences I-10 and II-4 were accorded opposite judgments by three fourths of the sample. It is fruitless to attempt to make too much of this outcome; however, it may be that some deep syntactic relationships such as the use of referential pronouns cross-linguistically could account for this apparent paradox.

We had hoped to find that code-changing to Spanish or to English was more a characteristic of one discourse code or the other, but this sort of tendency does not seem to be refinable from our data using this type of test. Perhaps the wrong question was asked. We had suspected that the sheer number of words in Spanish or English would be a strong indicator of which language the sentence mostly used. This is not obvious from our data. Nor is it obviously true that the code of the verb tense is uniquely responsible for the impression of the "code of the sentence", when code-changing is involved.

Perhaps what we did not find is an important as what we might have clearly proven to be true of such code-switching. We do not feel that the judgments we obtained are reflective of deep syntactic processes. Rather, much of the leaning toward one code or the other in judging a sentence as Spanish or English is probably caused by ad hoc aspects which may be nearly random in many cases. The point of our discussion is simply that the line between a sentence of English and a sentence of Spanish becomes blurred, albeit in varying degrees, when a code-change occurs. Although we have not investigated the matter, it is also possible that at some point a lengthy code-mix may blur the line also, but usually a code-change is triggered when this occurs.

Chapter X

ELLIPSIS IN BILINGUAL DISCOURSE

1 Introduction

Code-switching within one turn of speaking and particularly within the sentence has attracted most of the attention of those who study the bilingual. Code-switching at the point of change of speaker is commonly observed among the bilingual children we studied and among any group of bilingual speakers. Such code-alternation becomes interesting when the relationship between the statement, command or question and the elliptical response in the opposite code are closely scrutinized. In this chapter, we will discuss certain aspects of elliptical responses or fragments within English and attempt to show how opposite language, or code-switched, ellipsis may be analysed by appealing only to an extension of linguistic principles which are needed for the description of English ellipsis alone--in the case of English elliptical responses to Spanish utterances. Similarly, code-switched Spanish responses to English utterances should be fully describable within the bounds of principles necessary to the description of Spanish ellipsis.

Such a goal is in keeping with our fundamental philosophy that the bilingual does not have to learn additional grammar in order to code-switch effectively; he must only learn to apply already existing principles in a manner "agreed upon" by the members of his speech community. The linguistic alternatives presented to the bilingual in isolation are many, and the description of such an individual's code-switching behavior, when he has the opportunity or the need to alternate codes, seems to amount to little more than an allegorical statement of the effect of the dominance of one code in the social setting. The study of language often takes on the character of a nuclear physics of sociology. Just as the structure of the universe seems to be holographically represented in the smallest bit of matter, social structures are in all cases microscopically detailed in language.

This chapter explores the domain of the linguistically coupled speaker-hearer/speaker with special interest in the latter. Code-changes elliptical responses evince systematic linguistic knowledge to the extent that certain well-formed fragments of one language are rejected by bilingual speakers only in case these fragments are used as responses to an opposite language utterance. There appears to be no situation in which a speaker is linguistically constrained to respond in the same code as that used by his interlocutor. With such a theoretically significant gap in the linguistic constraining of code-switching, it is tempting to state the obvious with a sense of discovery: the syntactic description of fragments could be infinitely complicated, since we must assume that English fragment responses are possible for statements in any language. Certainly, this cannot be in fact true.

Fragments appear to have several features in common. The most important is that the fragment must "answer" a question if used as a response to a question. An alternative is to command the questioner to perform his speech act at a later time. Consider 01:

01. A: Where's the boat?

B: a. At the bottom of the lagoon
   b. Sunk.
   c. Later.
   d. Not now.
   e. *A wreck.

In 01a, one presumes that the fragment implies that "The boat is at the bottom of the lagoon.", not that the bottom of the lagoon is a better place to ask the question. Yet, the response, "Later, at the bottom of the lagoon" would at least be interpretable as an instruction to ask the question again at a more convenient time and place. The responses in 01c and 01d relate to a desire on the respondant's part to postpone the response, and more accurately, to reschedule the question. Speaker B may, of course, later initiate the response with speaker A's having to repeat it. This is a social courtesy. The response "sunk" in 01b does not directly answer the question "Where is the boat?", but is essentially states that "The boat is sunk" and offers an inescapable conclusion as to its whereabouts. If this conclusion is offered by "*A wreck", the fragment is not felicitous, depite the fact that "The boat's a wreck" may be a suitable response.

There is at least one other broad class of responses which are not felicitous. Consider 02:

02. A: Where's the boat?

B: a. Moored.
b. Wrecked.
c. Scrapped.
d. *Painted.
e. *Refitted.
f. Being moored.
g. Being wrecked.
h. Being scrapped.
i. Being painted
j. Being refitted.

All of the responses in 02a-e may be used as adjectives or as passives. All describe the end point of a procedure. In 02-f-j, the use of "being" simply changes the response from an "end point" in a process to a view of a process which is ongoing. The acceptable responses of 02a-c are still acceptable, and the unacceptable ones of 02d,e are now acceptable. What seems to be happening in 02-i,j is that one can now conclude that the boat is in some location. In 02d,e, however, the location of the boat is ill-defined, because a painted or *refitted* boat should be in the possession of the owner, but it is not or else the question would not have been asked. A *moored*, *wrecked*, or *scrapped* boat, on the other hand, is quite felicitously out of sight. To some degree, the responses of 02d,e are unsuitable explanations for the boat's absence. They are similar to stating "You don't see the boat because it is *painted*." Though this is a very strange thing to say, the speaker may have used invisible paint. A boat which "is being painted" is also a logically out of sight item, since the ongoing process is easily assumed to be occurring in a shop or garage etc.

The first class of unacceptable responses which we characterized by "*a wreck" is very probably ruled out on syntactic grounds. That is, the question has not been answered with a grammatical class presupposed by the WH word "where". That adjectives and passives but not noun phrases may be used as elliptical "slot fillers" for "The boat is ________", when "where" has been questioned, is clearly the tip of a linguistic iceberg. However, even more interesting for our discussion of code-switching is the nature of the restrictions just discussed which rule out 02d,e as fragmentary responses to the question in 02-A.

The perplexing feature which seems to permeate fragments is that they often may not be used when a fuller utterance can be used. This author, at least, would be satisfied with both responses in 03:

03. A: Where's the boat?

B: a. It's painted.
b. It's refitted.

Somehow, speaker B seems not to be claiming to directly answer the question as in 02d,e, and the questioner feels that he has gotten an explanation of the whereabouts of the boat. We will explore the possible reasons for this phenomenon and propose an analysis of code-changed fragments which incorporates this and other observations necessary for the description of English fragments.

2 The Problem

We list below several examples which are typical of the scores of code-changed fragments we have recorded in the children's discourse. The symbol [?] indicates that our adult informants found the response to be unacceptable or odd. Responses in parentheses are unattested types. Literal and idiomatic translations are given in the right column.

01: A: Quién tiene hambre? ('Who has hunger?' = Who is hungry?)

B: a. I am!
b. ? I do!
c. (?I have!)

02. A: ¿De quien es este? ('Of whom is this?' = Whose is this?)

B: a. My brother's.
b. My brother.
c. ?Of my brother's.
d. (?Of my brother.)

03. A: It must be Malcolm's.

B: Sí, de Malcolm. ('Yes, of Malcolm.'= Yes, Malcolm's.)

04. A: Whose name is Luis?

B: a. Mi hermano. (My brother.)
b. (El de mi hermano.) ('That of my brother.'= My brother's.)

05. A: ¿Quién quiere grape? (Who wants grape?)

B: a. I do!
b. Me!

06. A: ¿A quién llamas ahora? ('(to) Whom are you calling now?'= Who are you calling now?)

B: a. My daddy.
b. (? To my daddy.)

07. A: Who are you calling?

B: a. Al doctor. ('(to) The doctor.'=The doctor.)
b. ?El doctor. (The doctor.)

08. A: What do you need the spoon for?

B: a. Para dar la comida. ('(for) To feed.' = To feed.)
b. (?Dar la comida.) (To feed.(inf.))

09. A: What are you going to do?

B: Cortar. (Cut. (inf.))

10. A: I don't care.

B: a. A mi si. ('To me yes.' = I do.)
b. (?Yo si.) ('I yes. ' = I do.)

11. A: Los sapos se los comen. (Toads eat them.)

B: They do?

12. A: Los han visto? (Have you seen them?)

B: Yeah, I did. I've seen them.

13. A: Y tú Patricia, ¿en qué grade estás? (And you Patricia, what grade are you in?)

B: a. Cuatro.(Span.) (four)
b. Fourth.
c. ?Four.
d. (?Cuarto.) (fourth)

14. A: Estoy más grande que tú. (I'm taller than you.)

B: Not than my mom.

15. A: ¿Qué están hacienco? (What are they doing?)

B: Playing.

16. A: It's not hot any more.

B: A mí hot. ('To me hot' = Too hot for me.)

17. A: Vénganse pa' 'fuera! (Come outside!)

B: We don't want to.

18. A: Pon el ojo allí. (Put your eye there.)

B: I did.

19. A: Se fueron a Tejas. (They went to Texas.)

B: Who did ?

20. A: What size is that bed?

B: Chiquita. (Little (fem.))

21. A: Quién quiere ser la que sigue? (Who wants to be next?)
    B: I don't.

22. A: Ahora necesito otro secretario. (Now I need another secretary.)
    B: I will!

23. A: Do you want some apple cider?
    B: A mí no. ('To me no' = I don't)

24. A: ¿ Quién puede hacer a Santa Claus? (Who can make Santa Claus?)
    B: I do!

At first glance, it would seem that there must be a stage of translation which precedes any possible rule of fragment formation, since it has been argued convincingly, especially by Morgan (1973), that ellipsis in English is a referential device which operates upon full sentences deleting massive portions upon "identity" with portions of a previous speaker's utterance. A fragment is left behind which "must have been a constituent in the input to general ellipsis." (Morgan, 1973: 746). There is a priori no compelling reason to assume that for cross-linguistic fragments the actual process involved would be different in this regard.

3 The "Translation Hypothesis"

The Translation Hypothesis (TH) would find the identity necessary for ellipsis in a translation of the utterance of speaker A, as in 25 below:

25. A: Quién tiene hambre?
    B: (Translates: "Who is hungry?")
    (Underlying response: "I am hungry.")
    (Compare for identity: /I am HUNGRY/
    /who is HUNGRY/
    (Ellipsis deletes HUNGRY: I am ~~HUNGRY~~
    Response fragment: "I am."

Similarly, under TH, the response "I do!", which has been attested among the children, would derive from the incorrect, or literal, full sentence translation "Who has hunger?". We have found no child who could not correctly give the meaning of "Quién tiene hambre?" as "Who is hungry?" As a matter of fact, we asked one child very fluent in Spanish and English the question "You do what?" when she answered "I do." to the question, "Quién tiene hambre?". Surprise was her reaction when she realized that there was no full sentence "I do have hunger." available to her, and she quickly corrected herself, "I mean, I'm hungry."

This is not to say that interference has not been observed among these children. Younger children expecially often use "He gots three.",for example, to mean "He's three (years old)". The Spanish "Tiene tres años." (He has three years) is no doubt responsible for this pattern in English.

TH makes the subtle claim that the "mistake", if we might call it that, responsible for "I do!" as an elliptical response to "Quién tiene hambre?" was made in the translation step of the ellipsis formation process. This hypothesis also implies that these children must translate everything they hear routinely just in case they may want to respond with a fragment. Or, perhaps the translation is carried out not simultaneously but subsequent to a particular utterance after deciding to respond elliptically. This is not a tempting approach.

The distinction between "compound, coordinate and subordinate" bilingual has taken on many different meanings. Weinreich (1953), Ervin and Osgood (1965), Lambert (1966), Macnamara (1970) and many others have joined in the controversy. We therefore hesitate to use these words in talking about the children studied, since everyone is sure to have a different concept in mind. Simply stated, we felt most of the children studied to be "true bilinguals", having learned the two languages in different contexts: Spanish at home, and English in the school setting. Ervin and Osgood term this type of bilingual "coordinate." In any event, we saw no indication that the children, generally speaking, had to routinely translate to English or to Spanish. There were indeed a few clear exceptions in the case of a few children who knew very little English at the time we observed them. The data presented in this chapter do not related to their use of Spanish or English.

4 Underlying Code-Switch, etc.

Of course, there are several logically possible ways to approach the analysis of opposite language fragments. Since sentences such as "I'm going to cortar." are possible for these children, it might be argued that the response in 09, for instance, could be the result of a deletion performed on a sentence containing Spanish and English at some level. Such an approach would have the advantage of allowing a simple statement of the identity necessary for deletion in ellipsis, since the comparison would be done in one code only. However, this hypothesis runs into trouble when dealing with certain other responses. In 10, for example, *"A mí I care." is highly unlikely as a code-switched utterance, since the a mí contains a dative needed not for care but for importa, as in "A mí me importa" (I care). Similarly, in 01 we would have to derive "I am." from "*I am hambre."

Morgan (1973) rejects out of hand the hypothesis that "fragments are generated by a separate component operating solely on the output of the syntactic component...." (p. 748), and suggests that ellipsis either must apply before certain syntactic rules or have access to derivational history. The English data are very persuasive. He favors a notion of "general ellipsis" to the alternative of a "direct interpretative theory" which would generate fragments directly in the base and leave interpretation to some complex of yet undiscovered principles. While, as Morgan points out, "Neither theory handles all the data in a straightforward way," we will assume the essential workability of an ellipsis oriented theory here in dealing with the bilingual data. First, let us take a brief look at the properties of some fragments in English.

5 Identity or Synonymy?

It is difficult to imagine how some sort of identity between the initial utterance of speaker A and the full underlying utterance of speaker B could not be a requirement in the reduction of the latter to a fragment. Yet, we showed in the Introduction that there is at least one type of case where reduction to a fragment must be blocked just in case the question was not properly answered. What is the formal nature of this identity? It would be very desirable if the statements required for the grammar of English concerning identity in ellipsis were relevant to the generation of cross-linguistic fragments in English. If we could buy TH, we would not have to worry about the problem. We must somehow maintain the characterization of a "true bilingual" as someone who understands concepts in two languages. It strikes us that TH presents claims which are not analogous to those presented by transformational grammar, for example, where psychological reality is concerned. TH claims that translation is a rule of grammar.

We must be careful not to reject either of the hypotheses outlined in section D (Underlying code-switch, etc.) on the grounds that a fragments cannot be derived from a sentence which would in full surface form be unacceptable. "Come on!", for example, may have the response "I am!", even though "*I am coming on." is different in meaning at best. Similarly, "Get up!" may be answered by "I am!" to mean either " I already am up." or "I'm getting up."

In addition, there is a wide range of examples where the fragment, but not the full sentence, is an acceptable response. Consider for example:

26. A: What do you like about this painting?

B: a. The color.
b. *I like the color about this painting.

27. A: You didn't lift a finger!

B: a. I did so!
b. *I did lift a finger! (OK if literal)

If one takes too literally "deletion under identity", one is led to claim that these fragments in 26 and 27 are impossible, since the full sentences from which they are reduced are impossible. One might say that the same expression used in the question of 27 was not even used in the full sentence response of 27Bb--that some response having to do with finger exercises was given. We will later claim that the same expression was not used in the fragment in 27Ba either, but something closer in meaning to the negative polarity phrase (NEG LIFT A FINGER) was used positively--an expression which does not depend upon a negative in its scope for its intended meaning. Of course, another way out is to make the rule of ellipsis very elaborate and sensitive to such problems on an ad hoc basis----possibly making the rule obligatory in certain cases. This seems to us counterintuitive.

Even though a condition of word-for-word identity seems to be met between the potential fragment sentence and the initial utterance, there are cases in English were the fragment cannot be used, as in the following:

28. A: Who do you want?

B: a. *The broom.
b. Irving.
c. I want the broom.

29. A: How many do you want?

B: a. *The banana.
b. Sixty-four.
c. I want the banana.

30. A: I want the broom!

B: *Who* do you want?

A: a. The broom!
b. I want the broom!

Note that the full sentence replies in 28 and 29 are acceptable, while the fragments are at best bizarre, in 28Ba and 29Ba, unless they are replies consistent with the presuppositions of the WH question words *who* and *how many*. It is almost as if these presuppositions are "spread" onto the verb *want* by speaker A's question, and the verb cannot be used elliptically--or deleted.

However, in 30, where speaker B misunderstands speaker A's statement, the elliptical response is felicitous even though the answer is *not* consistent with the presuppositions of the WH question word *who*. It appears that speaker A has the "right" to use a fragment ignoring the presuppositions inherent in B's question just in case the former *knows* them to be inaccurate.

We note here that in 28, a possible fragmentary response would be "*Just* the broom." We can only guess why this is all right, but "The broom" is not. It seems that the response "Just the broom" implies that *the broom* has been selected from a class of objects capable of being wanted by speaker B. "Just" seems to limit or correct speaker A's presuppositions in much the same manner as would speaker B's stating "I don't want *someone*, I just want *the broom*."

Finally, we do not overlook, of course, the potential for the starred responses of 28 and 29 as jokes. Our point is that this is all they can be.

Strict identify of tenses is not absolutely necessary in order to trigger elliptical deletion. "Close enough" seems to work. Consider 31:

31. A: When have you been in this house?

B: a. Just yesterday. b. *I have been in this house just yesterday.

A fragment generally must answer the information specifically requested by speaker A's stress or actual wording. Apparent counterexamples as in 34 and 35 are no doubt surface manifestations of a network of implications speakers are capable of resolving at the social level.

32. A: Are *you* going   but 32'. A: Are you *going*?
B: Yes, me.   B: *Yes, me.

33. A: Do you have a watch?   but 33' A: Do you have the time?
B: Yes, a Seiko.   B: *Yes, a Seiko.

34. A: When did you see Fergus?
B: a. In Kansas City.
b. In August.
c. ?In the hospital.

35. A: Who wants to help me?   but 35' A: Who wants to play?
B: a. I do.   B: a. I do.
b. I will.   b. ?I will.

There is a large and interesting class of initial fragments which appear to delete a wide variety of subject-verb combinations depending upon social context. "Initial" fragments are those which may initiate a conversation, for they do not depend crucially on previously uttered material. We are not particularly concerned with these here, but one interesting apparent distinction made in English seems to parallel the *ser/estar* distinction in Spanish for some reason.

Adjectives with question intonation can be used to ask "Are you X?" with no previous utterance necessary, provided they belong to what would appear to be the same semantic class as those used with "estar" in Spanish. Note though that "tener" (have) is used with a noun "hambre" (hunger) to commonly express *be hungry.* However, when "hungry" or "thirsty" are used as code-mixed adjectives, the verb "estar" is used: "Está muy *thirsty*."

36. A: Tired? (Estar)
Happy?
Bored?
Hungry?
Thirsty?
Overworked?
Sick?

A: *Reliable? (Ser)
*Honest?
*Remarkable
*Fat?
*Serious?
*Hardworking?
*Sickly?

In Spanish, "Está enfermo." is used to mean "He is sick" while "Es enfermo." is used to mean "He is sickly." This seems to predict that a code-switch such as "?Está sickly" or "?Es sick" should be strange, and they in fact are. Present participles may also occur in this way as questions, as in "Working hard?". The present progressive uses "estar" in Spanish. Noun complements generally may not be used as initial fragment questions: "*A doctor?, *A ninny?, *A genius?". "Ser" is used in Spanish with noun complements.

A fragment which is a response to a previous fragment seems in some cases to have the option of using a part of the initial utterance only, in the underlying full sentence representation. Consider 37:

37. A: I'm eager to stay.

B: Who else is (eager to stay)?

C: I am...to get out!

but

37'. A: I'm eager to stay.

B: Who else is eager to stay?

C: *I am....to get out!

Another aspect of this identity is evidenced by puns of the sort in 38:

38: A: What did you look up?

B: a. The word "fragment", ?ha ha.
b. Her skirt, ha ha.

Assuming that speaker A means "look up" in the sense of search for where "up" is a particle, and that speaker B knows this, the response "Her skirt." is still understood by speaker A to be the elliptical form of the sentence "I looked up her skirt." Apparently, the ability to bend the rule of ellipsis in this way to delete under mere phonological identity is recognized as original and clever, and the answer is unanticipated and funny. In the question

"What did you look up?", it is presupposed by A that speaker B looked up something perhaps in a dictionary. Yet, speaker B can use a totally different meaning in the fragment response--just in case the word which represents this meaning would sound the same as that used by speaker A.

We have attempted to show that ellipsis can be blocked, as in 28 and 29, or forced to take place as in 26 and 27, despite apparent identity in the former and lack of it in the latter. Any attempt to describe the type of identity needed between part of the initial utterance and the response to trigger ellipsis seems to wind up as an attempt to describe a type of synonymy instead. This would imply an analysis which permits fragment formation, or deletion of potentially repetitive semantic information, when the underlying full sentence reply contains such material which is synonymous to that in the referent utterance. A certain amount of structural or syntactic identity must be maintained as well, though exactly how much is not clear to us.

The implications of this hypothesis are many, especially since neither we nor any one else has a ready theory of synonymy available. For example, we are put in a position of claiming that in 39 "my" and "your" are synonymous:

39. A: Have you seen my pet oyster?
    B: Yes, I have (seen your pet oyster).

Identical reference may be just one manifestation of this synonymy. Puns are difficult to understand where this particular sort of example is concerned. The answer "I have (seen my pet oyster) in 39 attempting deletion of "my" under phonological identity is remote. Yet, in 40, the response "I do" is certainly ambiguous:

40. A: I_i love you_j.

B: I_j do (love you_i) too.

or I_j do (love "you"$_j$) too.

Of course, the second meaning really means "I love myself too."

The difference between 39 and 40 seems to go no deeper than the fact that the former is a response to a question, and the latter is not. Note that in 41 the meaning conveyed by deletion of "me" under phonological identity with the speaker's utterance is extremely remote:

41. A: Do you_i love me_j?

41 B: I_i do (love you_j)

?I_i do (love "me_i")

This seems to be because it is in a response to a question. That is, "I do." cannot mean "I love myself" in responding to 41A, but it can when used as a volunteered elaboration on the statement of 40A.

Again, we have come across places in language where ellipsis is restricted not by an identity constraint but by what appears to be a nearly Grician sort of "honesty-in-responding" condition.

Our hypothesis also claims that the fragment in 42 really derives from a full sentence in which an expression of synonymous nature in intended.

42. A: You didn't lift a finger!

B: Yes I did (make a minimal effort.)

Using this approach, the meaning of "make a minimal effort" and that of the hypothetical "lift a finger" in the positive would be close enough to permit deletion of the former in a fragment, while still answering the question truthfully. It would be a bit strange if what speaker B really meant was that he in fact did lift a finger and that is all, but of course, not impossible. However, we are back to phonological identity and puns, if that was in fact the intent. In principle, there would be many actual expressions in English which could be said to have been deleted from 42B. The only requirement that they must meet is that both speakers agree that the deleted portion is synonymous with a negation of speaker A's intent. If speaker B deleted elliptically "make no effort at all" or "eat fudge all day" etc., speaker A could rightfully accuse speaker B of lying, since the latter has tried to claim that "eating fudge" and "helping" are synonymous.

6 Identity Types

We have shown that a certain looseness in this identity for ellipsis must be built in. It is clear that no matter what statement of identity we make concerning the majority of cases, we will still have the possibility of puns which require only phonological identity. Under any analysis there would have to be at least two kinds of so-called "identity". We feel that the majority of fragments require something less than absolute identity for deletion to have occurred. Semantic identity or synonymy appears to be sufficient in many cases, though as we have pointed out, many further restrictions are involved. Puns of the type discussed are a product of the dropping of the semantic identity requirement and in many cases a certain measure of structural identity as well.

We suggest that there are three types of identity which may bring about ellipsis in English:

43. Type I: Semantic, structural, phonological identity.
Type II: Semantic identity only.
Type III: Phonological identity only.

It is likely that "structural identity" may be the least important of type I, since examples such as the following are not hard to find:

44. A: Was he shot by the feds?

B: a. No, they didn't [shoot him].

b. *No, they weren't [the ones who shot him].

In 44, it does not seem to matter if the fragment changes the structure from passive in the question to active in the response, providing, of course, "they" is stressed, as "feds" is by virture of being a passivized subject. The change in 44Bb departs too far, apparently, from the import of the original question.

Now, these three types of identity in 43 do not have equal status. Type I is what we might call the "usual" case, restricted by factors such as those mentioned already in 28, 29 etc. Type II may be appealed to only in cases where the full sentence would be blocked because of various restrictions on the distribution of certain lexical items and expressions as in 26, 27 etc. That is, Type II is used when Type I fails, or, we feel, in cross-linguistic ellipsis, since phonological identity is impossible.

Using type II identity where it is not necessary, i.e. where the full identity--or Type I--would work, produces marginal fragments as in 45 and 46:

45. A: Must you go?
B: ?Yes, I'm afraid I really do(have to go).

46. A: Who would like some cookies?
B: ?I do (want some cookies).

We assume here that "must" is synonymous with "have to", and "would like" with "want". We have often observed this sort of response among the children studied, as well as among other speakers of English, although many speakers find fragments of this type aberrant when made aware of them.

In other words, "I do." in 46 is derived not by comparing "I do have to go." with a translation of "Must you go?", which would be "Do you have to go?"; rather, the meanings of "must" and "have to" are compared directly as units and found to both contain a certain meaning in common. In 47, below, this commonality of meaning is expressed by X, and the precise details making the two expressions slightly different are expressed by the subscripts _a_ and _b_.

47. A: Must you go?

B: I do have to go.

:

.

.

I do.

MUST means X_a

HAVE TO means X_b

A: X_a you....?

B: I X_b........

.

.

.

.

I do (X_b) X_b deletes under semantic identity with X_a

7 Code-change at Elliptical Response: The Bilingual

When discourse is viewed as a flowing sequence marked by changes of speaker, we may also note that a code-change takes place at this point as well. Speakers who respond with a fragment in English, when the previous statement to which it refers is in Spanish, do so _as if_ the previous statement had been in English. Bilinguals who respond with a Spanish fragment, when previous discourse in English, do so _as if_ the previous utterance had been in Spanish. In a sense, they do what one might expect both a Spanish dominant speaker _and_ an English dominant speaker to do separately.

A principle such as Type II deletion or semantic identity alone would seem to be what is permitting fragment formation in opposite language responses. That is to say that there is no step in the deletion process which requires a translation of the utterance to which the fragment is a response, but instead, certain elements of meaning in a Spanish utterance, for instance, are identical to elements of meaning in the English sentence which is to be reduced to a fragment--or at least "close enough." Since Type I identity is never available cross-linguistically, Type II is then appealed to on a consistent basis.

Among the children, we have observed both "I am!" and "I do!" as responses to "Quien tiene hambre?" (cf. 01). This is a good example for typifying cases where English and Spanish differ idiomatically. Adult bilinguals who exhibit no obvious dominance in either Spanish or English appear to prefer "I am" as a response. In fact, some do not even understand why "I do" should be a possible answer. The class of responses characterized by "I do" (re. "Quien tiene hambre?") is then that of a child who is not relating the concept "tener hambre" as a unit to the concept of "be hungry," but rather to the English relationship of HAVE X, comparing individual words for meaning. The child who says "I do" in response to "Quien tiene hambre?" is attempting to achieve both structural and semantic identity in constructing an elliptical response. However, by maintaining structural identity she maintained semantic identity only at the word level, as the structural expression of the concept "be hungry" is not the same in Spanish and English.

There is a strong tendency among the children we studied to follow the principle of semantic identity closely. As can be seen in the examples 01-24, departures from such a strategy are rare. One might expect to find fragments which are translations of same language fragments, as in 48, 49, but this practice is not very common among the children.

48. A: ¿A quién le gusta? ('(to) whom does it please?'=Who likes it?)

B: a. *To me.
a'. A mi.
b. I do (like it).

49. A: De quien es este? ('Of whom is this?' = Whose is this?)

B: a. *Of my brother.
a'. De mi hermano.
b. My brother's.

A few notes concerning the list of examples 01-24 may be of interest. In 04, "Mi hermano" is presumably reduced from "Mi hermano se llama Luis", (My brother calls himself Luis), a statement which answers the question "Whose name is Luis?". Semantically redundant information is deleted.

In 12, the context of "Los han visto?" was such that several children responded. One child said, "Yo si!", and the next to respond said, "Yeah, I did. I've seen them."

The examples in 22, 23, and 24 are typical of many which suggest that the child uses his own interpretation of the question in an inaccurate way. In 22, "I will" may come from "I will (be your secretary)" or the like. In 23, the child may have misunderstood, answering "A mi no (me gusta)" (I don't like it). In 24, "I do!" seems to be more of an answer to "Quien saba....?" than "Quien puede...?" (who knows how/who can). Again, this may be a manifestation of the child's responding to the structural appearance of the verb used in the question. Since in Spanish, "do" does not play a role in distinguishing "sabe" (know) from "puede" (can), as it does in English, this response "I do!" was probably produced by a pattern which permits "I do!" to be a response for any such question regardless of verb. Mistakes of this sort are common in purely English discourse as well.

Finally, we have argued against a claim that "true bilinguals" must translate an utterance in order to respond elliptically in the opposite language, and against a claim that a linguistic description would have to or would want to contain such a principle. The latter claim is the more difficult to refute, but the alternative would suggest that the phenomena discussed here cannot be described in a natural way.

Chapter XI

DEVELOPMENTAL TRENDS IN THE SYNTAX OF CODE-SWITCHING

As we have seen in Chapters VII-X, code-switching in the children studied is not random, but has a lawfully governed syntax. Two separate linguistic devices code-changing and code-mixing are involved. In this chapter we will discuss developmental trends in their use.

Code-changing, generally motivated by situational and stylistic factors, is the alternation of languages at the level of the major constituent (e.g. NP, VP, S). The code-change is a complete shift to another language system. All function words, morphology, and syntax are abruptly changed as in:

1. I put the forks en las mesas.
   (on the tables)
2. Let's see qué hay en el dos.
   (what there is on two)

The vast majority of spontaneous code-changes is our data are at the surface structure sentence level. Of our corpus of over 500 code-changes, only 30[1] involved smaller constituents than sentences, of which nineteen were noun phrases. A disproportionate number occurred in narratives. Moreover only one occurred in the speech of a child under nine. Given that non-sentence code-changes appear to be much more frequent in the corpora of Lance, Gingrás and Pfaff, and that they can be elicited from all the children in sentence-imitation tasks, while random switches can not[2] it appears likely that the ability to use non-sentence code-changes productively is acquired relatively late by the child in the process of becoming bilingual. Our younger informants code-changed relatively rarely. Another ability which appears to be developed late by these children is that of handling cross-language ellipsis. In the following examples, the first responses (B_1) are characteristic of the younger children, the second (B_2) of the older:

---

[1] An additional thirty-three noun phrases consisting of unmodified nouns have not been included here as their status as code changes is ambiguous.

[2] For detailed analysis of the data from the elicited imitation tasks see McClure and McClure (1975), Wentz and McClure (1976a) and Wentz (1976).

3. Speaker A: ¿Quién tiene hambre?
(lit. Who has hunger?)
B_1: I do.
B_2: I am.

4. Speaker A: ¿Cuantos años tiene?
(lit. How many years has he?)
B_1: He gots eight.
B_2: He's eight.

5. Speaker A: Who are you calling?
B_1: El doctor.
(the doctor)
B_2: Al doctor.
(to the doctor)

6. Speaker A: I don't care.
B_1: Yo sí.
(I yes)
B_2: A mí sí.
(to me yes)

The older children answer as if the previous utterance had been in the language of the response. The younger children's responses look as if they are relexicalizations of responses in the original language.

Code-mixing, the other type of code-switching, is the individual's use of opposite language elements which cannot be considered to be borrowed by the community. It occurs when a person is momentarily unable to access a term for a concept in the language which he is using but can access it in another code or when he lacks a term in the code he is using which exactly expresses the concept he wishes to convey. Code-mixing of color terms by the children studied provides a good example of the former since detailed analysis shows that for these children color terms in Spanish and English have identical referential and affective meanings. The sentence:

7. No van a aceptar a una mujer que can't talk business
(They are not going to accept a woman who)

is an example of the latter type of code-mixing. "Can't talk business" is derived from an idiomatic unit in English which has for the speaker no precise, culturally appropriate Spanish equivalent. Sentences containing code-mixes are generally perceived by the children to be sentences of one language containing elements of the other, unlike those containing code-changes which are felt to begin in one language and change to the other.

Code-mixing takes place within constituents, and there is usually at some level an indication that the code-mixed item is marked for use in a sentence of another code. For example, in sentence seven above, the use of que instead of who to introduce the relative clause suggests that the phrase is a code-mix and not a code-change while in 8, the noun

8. I put the tenedores on the table.
(forks)

phrase "the tenedores" is marked for use in an English sentence by the article "the." The morphology and phonology of "tenedores" (/tenedor + es/) is entirely Spanish nonetheless. Consequently, it is unlikely that, among bilinguals, such an occurrence would represent a lexical borrowing. In the sentence:

9. I want a motorcycle verde. (green)

we can say that the Spanish adjective "verde" is code-mixed into an English sentence. Spanish placement of "verde" indicates it is not a borrowing. The noun phrase "a motorcycle verde" is marked by "a" as being an English noun phrase. It could not be used in a Spanish sentence, but "un motorcycle verde" could, in which case "motorcycle" might be either a borrowed or code-mixed noun. Its status is ambiguous because there are no clear morphological or syntactic indicators. Phonology is only one clue in disambiguating the status of opposite language elements, because they often contain a mixture of Spanish and English sounds.

While a word may cotain phonemes of both languages, there are no examples in the children's speech of words containing morphemes of both languages. There are no code-mixes within a word. Derivational or inflectional affixes occur with a root of the other language only if it has been phonologically adapted (in Gingrás' terms, only if it is a substitution or lexicalization). Table One summarizes our data on types of code-mixes by age.

Table 1

Code Mixing by Matrix Language and by Age

	informants*				informants		
Spanish sentences	jr	sr	total	in English sentences	jr	sr	total
uns							
(Ind Art)$_S$ + (N)$_E$	18	10	28	(Ind Art)$_E^{**}$ + (N)$_S$	3	0	3
(Def Art)$_S$ + (N)$_E$	21	12	33	(Def Art)$_E$ + (N)$_S$	3	0	3
(Poss Adj)$_S$ + (N)$_E$	21	8	29	(Poss Adj)$_E$ + (N)$_S$	2	1	3
(Dem Adj)$_S$ + (N)$_E$	3	0	3	(Dem Adj)$_E$ + (N)$_S$	1	1	2
(Numeral)$_S$ + (N)$_E$	0	3	3	(Numeral)$_E$ + (N)$_S$	0	0	0
(Prep)$_S$ + (N)$_E$	6	7	13	(Prep)$_E$ + (N)$_S$	0	0	0
(Art)$_S$ + (Adj)$_E$ + (N)$_E$	3	4	7	(Art)$_E$ + (Adj)$_S$ + (N)$_S$	0	0	0
(Prep)$_S$ + (Adj)$_E$ + (N)$_E$	0	2	2	(Prep)$_E$ + (Adj)$_S$ + (N)$_S$	0	0	0
(Adj)$_S$ + (N)$_E$	7	2	9	(Adj)$_E$ + (N)$_S$	0	0	0
jectives							
(Adj)$_E$	9	2	11	(Adj)$_S$	0	1	1
(Adj-color)$_E$	20	8	28	(Adj-color)$_S$	0	0	0
rbs							
(Verb)$_E$	2	0	2	(Verb)$_S$	1	2	3
lverbs							
(Adv-place)$_E$	1	3	4	(Adv-place)$_S$	0	1	1
(Adv-time)$_E$	1	2	3	(Adv-time)$_S$	0	2	2
onjunctions							
(Conj)$_E$	0	0	0	(Conj)$_S$	1	5	6
thers							
(Interjection)$_E$	7	4	11	(Interjection)$_S$	5	4	9
(Epithet)$_E$	1	2	3	(Epithet)$_S$	3	0	3
total code mixes	138	75	213		22	22	44

Table 1 (continued)

* Informants are ranked as junior or senior on the basis of their linguistic maturity. Junior informants are those born after 12/30/66, while senior informants were born before 12/31/66, except that one informant (born 5/14/68) is classified as senior despite his age.

** Nouns occuring with a zero article are classified as neither code mixing nor code changing since it cannot be determined which they are.

It reveals a developmental pattern. Children who do not have equal or near equal proficiency in both Spanish and English code-switch predominantly at thw word level; most such switches are of nouns but more than a negligable number of interjections and color adjectives may also be found. These children do little code-changing and most is at the sentence level. Children who are fluent bilinguals (in general the older children) code-switch predominantly at the constituent level. However, for them also code-changing is mainly of sentential level constituents. We should also note that there are children who are competent bilinguals but who virtually never code-switch, and that one of the younger girls code-switches almost incessently. Table 2 summarizes out data on code-mixing and code-changing by age.

Table 2

Code-Mixing and Code-Changing by Age and Language

	informants						
	junior			senior			
code-mixing	Sp	Eng	Total	Sp	Eng	Total	TOTAL
sample	138	22	160	75	22	97	257
percent	54%	9%	62%	29%	9%	38%	100%
code-changing							
sample	15	10	25*	59	56	115	140
percent	11%	7%	18%	42%	40%	82%	100%

* One junior informant (born 11/3/67) was omitted as her speech differs markedly from that of other junior informants as regard code-changing. She produced 52 code-changes in the material sampled, which changes the junior-senior rates to 40% vs. 60% instead of 18% vs. 82%.

Chapter XII

CONCLUSION

We began this study with two foci- interference and code-switching. The former we found to be of little importance; in the speech of the children studied interference accounts for less than twenty percent of all structural deviations from standard English and standard Spanish. The latter is of much greater consequence. It is clear that the children's alternation between languages is neither random nor the result of a linguistic deficit. All of the children studied recognize the fact that two separate linguistic systems are used in their speech community. All observe linguistic co-occurrence rules in speaking; although, they may occasionally misidentify the linguistic system to which particular syntactic, phonological, or lexical elements belong.

Their code-switching proceeds in accordance with grammatical and functional principles. Socially based principles operating within their speech community permit these children not only to integrate one code into discourse being carried out in another (code-mixing) but also to alternate the actual code of the discourse (code-changing). One purpose served by this sophisticated use of linguistic signs is to identify individual bilinguals as members of a particular community. Code-switching for the bilingual also functions to mark situational changes and stylistic expression, perhaps more clearly than does register alternation for the monolingual. The adept use of code-switching by the bilingual can be viewed as analogous to the creative use of language by a skilled monolingual author or orator.

What are the implications of our findings? We have stressed that the children studied are not linguistically impoverished. Does it then follow that they face no language based problems in the classroom? The answer can only be, it depends. For those children who begin school speaking only Spanish, the first few years in non-bilingual classrooms with monolingual, English speaking teachers are a constant struggle. To cope with what is expected of them monolingual Spanish speaking children must request and convey information through gesture, imitate the actions of other children, or use a bilingual child as an intermediary.

Moreover, it is not only the monolingual child who may have difficulty. Both the English and Spanish of the children studied is characterized by many non-standard features. In some cases these features are dialectal in nature and need pose no problem in the classroom provided the teacher is aware yet uncritical of them and selects and uses material accordingly. In other cases deviations from the standard are developmental in nature. Some such deviations, for example those involving conjunctions and prepositions, are barriers both to the child's comprehension of the messages of others and to their comprehension of his messages. The children's Spanish and English vocabularies also appear to be less extensive than those of the middle class mainstream child. Vocabulary limitations have been shown to hinder a child's mastery of reading skills so expansion of both the children's Spanish and English vocabulary would appear to be very important.

However, it is not the structure of the children's languages which appears to be most significant with respect to school success. The children come to school having already mastered the basic structure of Spanish and by the time they have been in school for two years they have also mastered the basic structure of English. Consequently drills focused on these basic structures seem to be unnecessary. The problem rather than being one of language structure appears to be one of language use including sociolinguistic skills and the logical structure of argumentation. For example, in the course of our study the children frequently told us stories, some at our request others on their own initiative. Over and over we noticed that the children were unable to convey sequence coherently, either causal or temporal. Reference was also seldom explicit. Pronouns were used both before their referents had been explicitly stated and also when these referents were ambiguous. Sequence clues and pronominal reference clues are important in reading; a child's failure to master them will probably impede his reading development.

Language is also important in gaining information and demonstrating its acquisition. An important part of the teaching-learning process in the school consists of question-response interchanges between pupils and teachers. However, we found that the children studied rarely used the teacher as an information resource except with respect to ascertaining whether they had correctly understood a task. Their non task-directed interchanges with the teacher were much less frequent than those of their Anglo American school fellows, and this statement holds true even if one considers their interactions with their bilingual teachers as well as with their monolingual teachers. Task oriented questions constituted the majority of the utterances directed to teachers by all the Mexican-American children, while for many Anglo children such questions were a small minority of these utterances. Additionally, Mexican-American kindergarteners failed to respond to half of the questions addressed to them by their monolingual teacher and more than a quarter of the questions addressed to them in Spanish by their bilingual teachers while the Anglo kindergarteners failed to respond to less than one sixth of the questions addressed to them.[1] This differential response pattern of Anglo and Mexican-American kindergarteners is important despite the fact that it is not replicated in first grade (all first graders responded to virtually every question addressed to them) because often assessments of a child's classroom behavior in his initial year of school follow him in cumulative files and influence teacher expectations of him in the years to come thereby possibly influencing his achievement (vide e.g. Rosenthal & Jacobson, 1968).

To summarize, it is our opinion based upon the data collected during the two year of our field research that while certain elements of language (for example: prepositions, conjunctions, and vocabulary in both Spanish and English, and tag questions in English) might profitably be taught, in general emphasis upon the teaching of language structure is not necessary. Instead language teaching might more profitably be directed to aspects of language use. However, in order for an adequate pedagogy of language use to be developed, we need additional research on the following topics: (1) What language skills are required for successful exchange of information in the classroom - in reading, writing, and verbal interaction?; (2) Do these skills differ if the language of communication is Spanish or English?; (3) Do these skills differ from analogous skills necessary to communication outside the classroom, (4) Which of these skills do children possess on school entry. A research program designed to answer these questions would of necessity be very broad. However, it is only when we have answers to such questions that we will be able to design programs to meet the language needs of school pupils.

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[1] The figures cited here come from tabulations of all teacher-pupil interactions in kindergarten and first grade which occurred on thirty randomly selected days in the course of the second year of this study.

Appendix A

Demographic Information on the Population Studied

Children from small town

Code	Child's birthdate	Child's birthplace	Location of first school	Child's English Rating	Child's Spanish Rating	Grade Level in 1974-1975	Mother's birthplace	Mother English Speaking	Father's birthplace	Father English Speaking
PG	?/?/68	Mexico	Illinois	I	III	1	Mexico	no	Mexico	no
MM	?/?/68	Mexico	Illinois	I	III	1	Mexico		Mexico	
SH	6/8/69	Illinois	Illinois	III	I	K	Mexico	yes	Mexico	no
DH	10/7/67	Illinois	Illinois	III	I	2	(Vera Cruz)		(Jalisco)	
AM	6/14/69	Illinois	Illinois	III	III	K	Texas	yes	?	?
RM	11/28/64	Texas	Illinois	IV	V	4	(Cinto)			
JS	10/16/69	Illinois	Illinois	I	III	K	Mexico	no	Texas	yes
SS	4/26/68	Illinois	Illinois	II	III	1	(Nuevo Laredo)		(Maxwell)	
LpS	8/21/65	Mexico	Illinois	IV	V	4				
CS	11/3/67	Illinois	Illinois	II	III	1	Mexico (Coahuila)	no	Texas	yes
LS	9/30/68	Indiana	Illinois	II	III	1		no		no
MyS	4/6/67	Mexico	Illinois	III	IV	2	Mexico		Mexico	
MS	11/1/64	Mexico	Illinois	III	IV	2	(San Luis Potosi)		(Nuevo Laredo)	
NS	9/10/63	Mexico	Mexico	III	V	4				
HS	9/21/61	Mexico	Mexico	III	V	5				
RV	12/11/68	Illinois	Illinois	II	III	K	Mexico	no	Texas	yes
JV	9/20/67	Texas	Illinois	II	III	1	(Reynosa)		(Pharr)	
MR	7/8/69	Texas	Illinois	I	III	K	Mexico	no	Mexico	no
AR	?/?/65	Mexico	Mexico	I	IV	2	(Juarez)		Mexico	
CR	?/?/64	Mexico	Mexico	I	IV	3			Mexico	
RA	9/5/71	Illinois		I	I		Texas	yes	Texas	yes
DA	5/14/68	Illinois	Illinois	III	III	1	(Mercedes)		(San Marcos)	
TA	5/30/66	Illinois	Illinois	IV	IV	4				
PA	5/30/65	Illinois	Illinois	IV	V	4				
LM	6/24/68	Mexico	Illinois	I	III	1	Texas	no	Mexico	no
JM	12/31/66	Mexico	Illinois	I	III	2	(Maxwell)		(Quiñones)	

page 2 (continued)

Code	Child's birthdate	Child's birthplace	Location of first school	Child's English Rating	Child's Spanish Rating	Grade Level in 1974-1975	Mother's birthplace	Mother English Speaking	Father's birthplace	Father English Speaking
RG	6/20/67	Texas	Illinois	II	III	2	Mexico (Nuevo León)	yes	Texas (Laredo)	yes
GG	?/?/63	Texas	Illinois	IV	IV	5				
LR	9/25/65	Texas	Illinois	III	IV	2	Texas (Pharr)	yes	?	?
HC	11/11/66	Illinois	Illinois	III	IV	3	Mexico (Linares)	yes	Texas (Maxwell)	yes
EC	8/8/65	Texas	Illinois	III	IV	3				
AC	4/9/63	Texas	Texas	III	V	6				
OG	8/29/66	Texas	Texas	III	IV	3	Texas	yes	Texas	yes
HG	10/4/64	Texas	Texas	III	IV	4				
AG	7/13/66	Montana	Illinois	III	IV	3	Texas (Laredo)	yes	?	?
MG	5/7/64	Texas	Illinois	III	IV	3				
RP	12/6/64	Texas	Texas	IV	V	3	Texas (Laredo)	yes	Mexico (Nuevo Laredo)	yes
RoP	9/21/63	Wisconsin	Texas	IV	V	4				
LP	5/2/62	Texas	Texas	IV	V	5				
ES	12/29/62	Illinois	Illinois	IV	V	5	Mexico (Nuevo Laredo)	yes	Texas (San Antonio)	yes

Children from small city

Code	Age	Child's English Rating	Child's Spanish Rating
T	5	II	III
D	4	I	II
M	4	I	II
O	4	I	II
R	4	I	II
J	4	I	II

Notes:

[1] The children were placed in four groups according to their English speaking ability and five groups according to their Spanish speaking ability; Group I being the least proficient in both cases. Categorization was based on the subjective impression of the research team.

Notes: (Continued)

2. The children's parents were rated as being English speaking if they could carry on a conversation in English.

3. All the children in the small city were enrolled in a headstart program.

4. Double spacing between entries indicates different family groups.

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